MacWEEK

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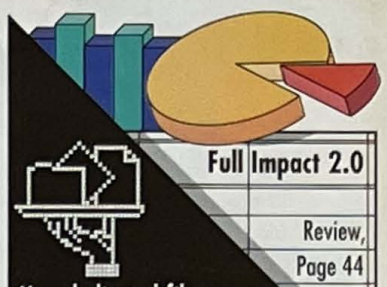

Gang of 4 cuts images to size

Video compression plays two shows

By Connie Guglielmo and John Webster

Boston — Demonstrations by Apple and SuperMac Technology last week singled out video from the multimedia medley as the next technology frontier for the Macintosh.

At Siggraph '90 in Dallas, Apple's Advanced Technology Group showcased proprietary video-compression and decompression software that could be an extension to 32-bit QuickDraw. Apple said the technology may be incorporated into system software as early as the end of 1991 (see story, Page 10).

At Macworld Expo here, SuperMac demonstrated a board and software that compress 24-bit color images and video, as well as digital stereo audio, onto storage devices. The optimum compression ratio will be 25-to-1, although higher compression rates are possible. The board decompresses the video in real time (30 frames per second) for playback in a window on the Mac screen.

See Compression, Page 9

Mac in transition at expo

Users eager for new Macs

By MacWEEK staff

Boston — It was wet and muggy rather than hot and heavy at Macworld Expo here last week. Apple CEO John Sculley showed some innovative new products in his keynote address, but by and large the atmosphere was restrained, with developers and users alike in a holding pattern until Apple releases its new low-end hardware and high-end system software.

RICK FRIEDMAN/BLACK STAR

In his keynote address at Macworld Expo, Apple CEO John Sculley said the right-brained Mac is moving toward left-brain applications.

Show goers seemed caught by the general mood of ennui. "I've been coming to these shows since they first started. Year after year, things get to be the same," said Jan Harrington, president of Black Gryphon Ltd. of Salt Point, N.Y. "There's nothing extraordinary and new that really jumps out at you."

"It was really a shopping show," said Robert Dattilio, director of the Dante Alighiere Cultural Center in Boston. "The emphasis was on buying and selling rather than excitement."

On its fifth time around, the Boston show went off with fewer hitches than in previous years. The nearly 50,000 attendees and 430 exhibitors were old hands at navigating the 300,000 square feet of exhibit space in the Bayside Expo Center and World Trade Center and at shuttling between the exhibits at the halls, the conferences at the Wang Center and their rooms at the 32 sold-out official expo hotels.

See Macworld Expo, Page 8

A peek behind expo's curtain

REPORTER'S NOTEBOOK

By MacWEEK staff

Boston — Crowding into hotels, bunking in friends' living rooms, chowing down at Beantown eateries and vying for cabs, a somewhat-diminished pack of Macintosh fans swelled city coffers by $56 million and lined developers' pockets with undetermined heaps of green during the four days of Macworld Expo here.

Although it packed less of a punch than it did in the hacker days, the expo still had its weird and its wonderful, its wild and its wacky.

▸ **Worst-kept secret.** An envelope addressed to Radius Inc. President Mike Boich and marked "confidential" was out in plain view at the booth-registration desk, despite a well-intentioned Radius employee who tried to cover it up. The envelope read, "This package contains confidential and privileged information about a private investment opportunity. To be opened only by your board of directors." Hmm.

RICK FRIEDMAN/BLACK STAR

Drizzles and muggy weather didn't deter the expo crowds from making their way from venue to venue. Macintosh fans boosted Boston coffers by $56 million.

▸ **Color me black and blue.** A color boxing match pitted SuperMac against Radius, as both companies now offer technology for ensuring color consistency between image display and output. No low blows were exchanged, but according to observers, SuperMac's uppercut may be its scanner support, while Radius' counterpunch is more-complete Pantone color offerings.

▸ **Things that glow in the dark.** Sigma Designs pulled a Flash Gordon imitation; its booth was fully equipped with electromagnetic field-mea-

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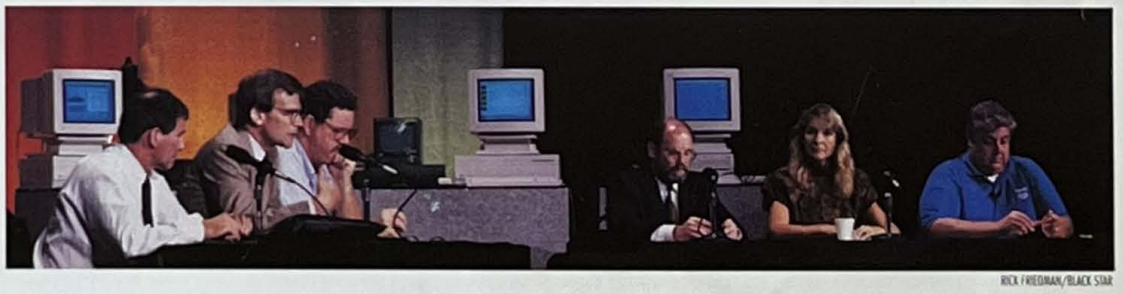
Industry leaders prescribe strong medicine



RICK FRIEDMAN/BLACK STAR

Unsolicited advice (left to right): Panelists Bill Campbell, Paul Brainerd, Stewart Alsop, Gordon Eubanks, Heidi Roizen and Mike Maples.

By Daniel Farber

Boston — In an unsolicited "Open Letter to Apple Computer," a high-powered panel of software executives last week prescribed strong medicine for Apple CEO John Sculley. To thrive in the new decade, Apple needs to expand its market share, price its products more aggressively and create critical mass in a broad spectrum of market segments, said the officials from five of the biggest Mac developers.

"Right now, the Mac is niched as a graphics machine," said Bill Campbell, president of Claris Corp. "Multimedia as a market segment must be put aside."

The panelists also expressed con-

See Advice panel, Page 8

Pillar plans financial package

FYPlan simplifies business modeling

By Daniel Farber

Boston — Pillar Corp. last week previewed FYPlan, a high-end financial modeling and forecasting package for the Macintosh, at Macworld Expo here.

The program, built around a multi-user relational database, presents a flexible user interface designed to simplify the financial planning process, according to Max Toy, president and CEO of the Foster City, Calif.-based Pillar. Toy previously served as a senior executive with Commodore, IBM Corp. and Compaq Computer Corp.

See Pillar, Page 8

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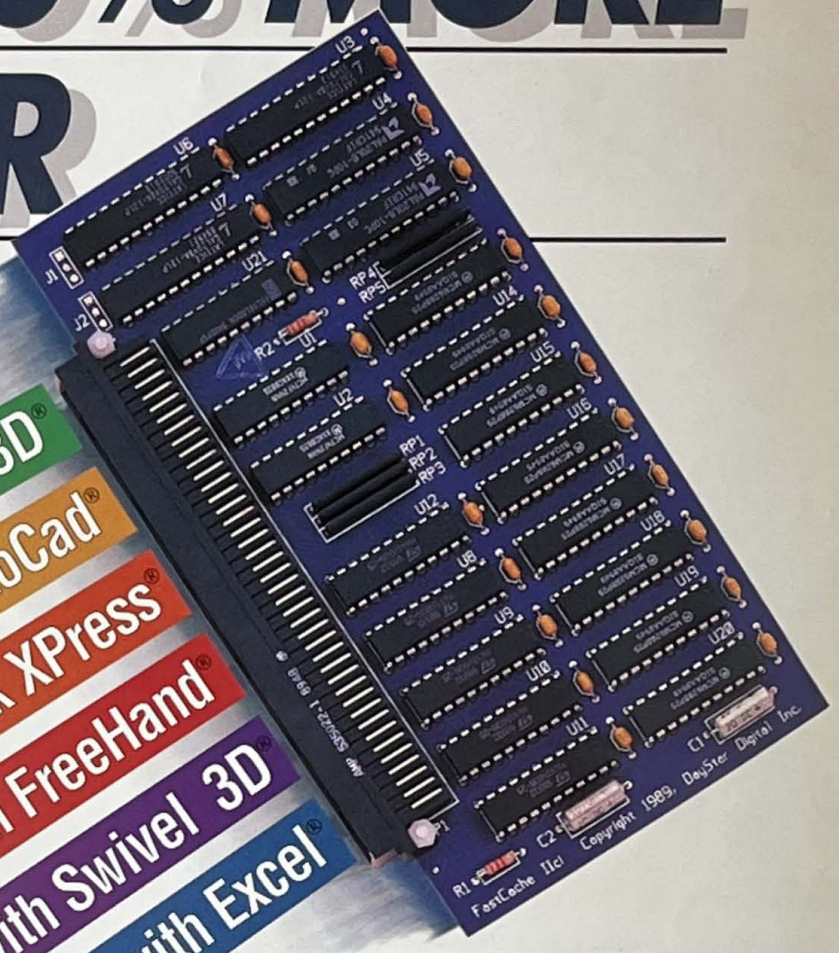

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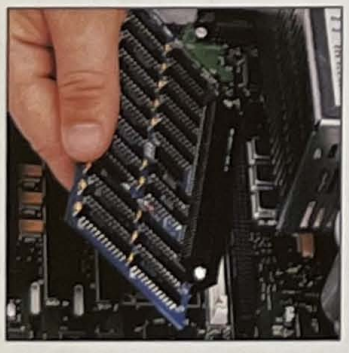

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E.T.O.: Apple CD-ROM gives developers whole shebang

By Raines Cohen

Boston — Apple last week announced E.T.O.: Essentials-Tools-Objects, a subscription CD-ROM full of its most popular development tools. Billed by Apple officials as "the ultimate development environment," the disc contains more than 560 Mbytes of programming and reference materials for Macintosh and Apple II developers.

"This disc is for high-end power developers who want all the tools and want to stay up to date," said Jack Hodgson, product manager.

Developer Essentials, a major part of the package, is 280 Mbytes of tools, code, all international versions of HyperCard and system software, technical notes, and a stack version of "Inside Macintosh." Developer Essentials is also available separately on a CD-ROM bound into develop, Apple's technical journal.

The tools section of the E.T.O. disc includes the Macintosh Programmer's Workshop development environment; tools for programming in C, C++, Object Pascal and assembly under MPW; ResEdit; and MacsBug. Objects include MacApp and all support files for Apple's object-oriented programming languages.

The disc contains not only final release versions of the products but also newer beta-test versions. Subscriptions include four quarterly updates, plus hard-copy versions of all final documentation and all revisions to the paper manuals.

Prices for a one-year subscription range from $300 for customers who already own all the components to $995 for those who own none. □

HSD scanner zooms in on gray scale

By Henry Norr

Boston — HSD U.S. Inc., a pioneer developer of gray-scale scanners for the NeXT workstation, last week released a Mac model capable of resolutions up to 1,500 dpi.

Called Scan-X Professional for Macintosh, the unit distinguishes among 256 levels of gray and offers resolutions of 300 dpi for gray-scale images; the full 1,500-dpi resolution is available only for line art.

The Scan-X incorporates HSD's Gray Spectrum Enhancement technology, which lets users improve detail and definition in a scanned image by assigning all 256 available values to a designated portion of the gray spectrum. Most competing eight-bit scanners, according to HSD, waste much of their potential for detail by spreading their 256 values across the full spectrum from white to black, regardless of the range of shades used within a particular image.

The scanner is shipped with HSD's Scan-X desk accessory, which allows scanning from within any application, and with Enhance, an image-analysis and -enhancement program from Micro Frontier Inc. of Des Moines, Iowa. The application, which has a retail price of $375, offers real-time gray-level manipulation, colorization, 80 real-time filters, scaling from 25 percent to 800 percent, rotating, brushing, and masking, among other advanced features.

Scan-X Professional for Macintosh will retail for $1,995, but during the month of August is available directly from HSD for $1,495. Options available from the company include an automatic document feeder and a NeXT interface kit.

HSD U.S. Inc. is located at 1350 Pear Ave., Suite C, Mountain View, Calif. 94043; (415) 964-1400. □

MacTerminal gets big rewrite

By Henry Norr

Boston — MacTerminal 3.0, a new and completely rewritten version of Apple's original Mac telecommunications and host-access software, will be released next month, the company said here last week.

The program, first released in 1984, is now based on the Macintosh Communications Toolbox, a new system-software extension that gives applications access to an expandable set of standard communications capabilities with a consistent Mac interface. Users can add or remove terminal-emulation and protocol functions by dropping "tools" into a folder when needed.

In announcing MacTerminal 3.0, Apple said the new program would serve as an example application of the new Toolbox, which it described as the company's "strategic communications architecture."

In addition to TTY and VT102 terminal emulation, MacTerminal Version 3.0 will support VT320 emulation and multiple connections.

The product will be available through authorized Apple resellers for $125. Customers who purchased MacTerminal on or after May 1 can get the new version free by sending a dated sales receipt and their original program disk to Apple Computer, MacTerminal Software Upgrade, P.O. Box 16206, Denver, Colo. 80216.

Earlier buyers can get the new release by returning their original program disk with a check or money order for $65, payable to Apple Computer Inc., to the same address. □

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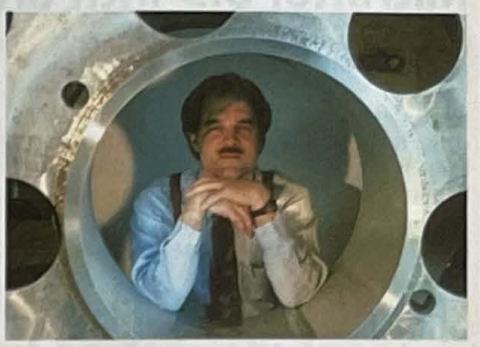

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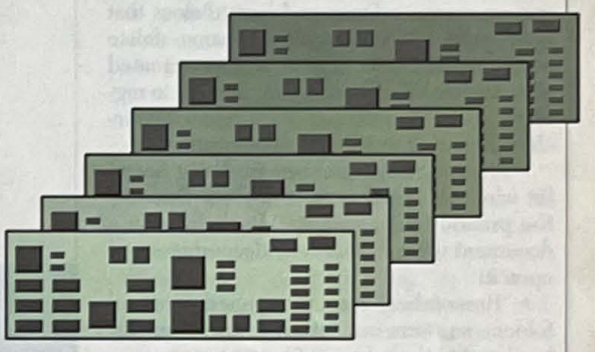

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MicroNet 3.5-inch drives faster than SCSI

By Henry Norr

Boston — MicroNet Technology Inc. last week demonstrated a 3.5-inch, 426-Mbyte drive that the company said transfers data three times as fast as most competitors in the 3.5-inch category.

Due next month in internal and external configurations, the new Ultra/426 is based on a recently announced Seagate mechanism; it was developed at a facility that was part of Imprimis Technology Inc. until Seagate Technology Inc. acquired that company last year.

With spindle speeds of 4,400 rpm, access times of 15 milliseconds and 60 Kbytes of segmented cache, the Ultra/426 drives are capable of sustained data transfers of 2.1 Mbytes per second and bursts of up to 5 Mbytes per second. According to MicroNet, they are the first 3.5-inch storage systems that exceed the 1.4-Mbyte-per-second capacity of current Macs' SCSI ports and therefore the first that do not hold back Apple's most recent and fastest Mac models.

The internal Ultra/426i, priced at $3,695, will fit into the Mac SE, SE/30, IIcx and IIci, as well as six-slot machines. The external 426e, at $3,795, measures 6.25 by 7.75 by 2.25 inches. The drives, covered by a one-year warranty, carry an MTBF (mean time between failure) rating of 100,000 hours.

For an additional $600, the Ultra/426 drives will be packaged with MicroNet's NuPORT, a forthcoming NuBus card that adds an independent SCSI port capable of handling 12 Mbytes per second. The card, which supports direct memory access and the SCSI-2 standard, was also shown at last week's Macworld Expo and is now scheduled for release next month.

MicroNet Technology Inc. is located at 20 Mason, Irvine, Calif. 92718; (714) 837-6033. □

Shortcut simplifies file management, navigation

By Henry Norr

Boston — Aladdin Systems Inc. last week announced Shortcut 1.5, an enhanced version of its disk-management and navigation utility.

The $79.95 Startup document (INIT) adds a pop-up menu to Open and Save dialogs that helps users find missing files; rename, delete and lock files; decompress archives created with Aladdin's StuffIt; and jump quickly to regularly visited locations in their folder hierarchies. Due next month, the new version will:

- Present StuffIt archives in dialog boxes' list windows as if they were folders. Opening the pseudo-folder and double-clicking on a document will automatically decompress and open it.
- "Remember" recently opened files and folders, so users can return to them quickly by choosing them from a Shortcut menu.
- Have a View command that lets users open, copy and print text and PICT documents from within the dialog boxes of any application, even programs that don't normally open such documents. For example, Aladdin said, the feature will make it easier for users to paste PICT images into their word processing documents or text into drawings.

Upgrades will be sent free to registered users, Aladdin said.

Aladdin Systems Inc. is located at Deer Park Center, Suite 23A-171, Aptos, Calif. 95003; (408) 685-9175. □

FoxBASE+/Mac gets faster over networks

By Henry Norr

Boston — Promising networked database users a major improvement in execution speeds, Fox Software Inc. last week announced an upgrade to its FoxBASE+/Mac line.

The upgrade, which like the current release will be called Version 2.01, will be shipped free to registered users this month, the company said. The new FoxBASE+/Mac Multi-User, which incorporates technology first developed for FoxPro/LAN for IBM PC networks, performs some tasks 25 times faster than its predecessor, according to Fox, while the single-user update fixes all known bugs.

The new network release is designed especially to excel under heavy loads. "The more uses, the better its relative performance," the company said.

Prices for the FoxBASE+/Mac family are unchanged: $495 for the single-user version, $695 for the multi-user version, $300 for the single-user runtime module and $500 for the multi-user runtime module.

Fox Software Inc. is located at 134 W. South Boundary, Perrysburg, Ohio 43551; (419) 874-0162. □

The desktop Mac with more tha

Mass Micro optical reads data faster

By Henry Norr

Sunnyvale, Calif. — Mass Microsystems Inc. last week became the second Mac storage vendor to introduce a magneto-optical drive based on the new Canon mechanism.

Due next month at $4,349, Mass Micro's OptiPak holds 488 Mbytes of data on removable 5.25-inch cartridges, one of which is included. Additional cartridges will be priced at $220 each.

The Canon cartridges hold less data than the 594- and 650-Mbyte cartridges used by Sony and Ricoh erasable optical mechanisms, which are offered by a long list of Mac vendors, and the Canon device cannot read or write cartridges in the other format.

What the new mechanism does offer, Mass Micro said, is better performance and reliability. Primarily because it rotates the media at 3,000 rpm, compared with 2,400 in the Sony and Ricoh mechanisms, the OptiPak reads data much faster than the other systems. (Tahiti optical drives, marketed by Storage Dimensions of San Jose, Calif., use a MaxOptix mechanism that also rotates at 3,000 rpm.)

In addition, Mass Micro said, the Canon drive has a built-in dust-filtration system that reduces the danger of head contamination. Optional replacement filters, a head-cleaning cartridge and a disk-cleaning kit also will be offered.

MicroNet Technology Inc. of Irvine, Calif., last month announced its CMO-1, a similar Canon-based optical drive (see MacWEEK, July 31). Mass Micro said cartridges will be interchangeable between its OptiPak and the MicroNet unit.

Mass Microsystems Inc. is located at 810 W. Maude Ave., Sunnyvale, Calif. 94086; (408) 522-1200; (800) 522-7979. □

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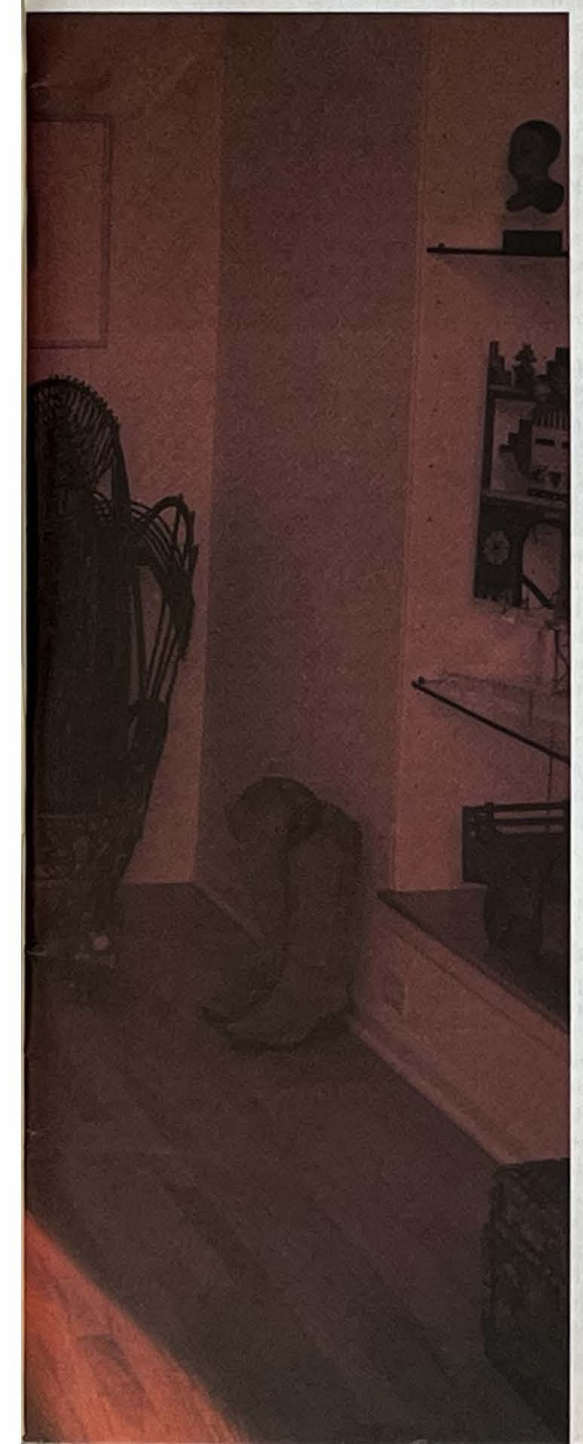

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Feature-rich Nisus gets richer with 3.0

By Henry Norr

Solana Beach, Calif. — Nisus 3.0, the latest version of Paragon Concepts Inc.'s $395 word processor, began shipping last week.

A long list of enhancements includes:

- **New "Place" options.** Users can place a full-size or scaled image of a designated page from a new or existing document into a Nisus 3.0 file. The image, hot-linked to the source, is updated automatically when the original is edited. Double-clicking on the image opens the source file.
- **Graphics enhancements.** Documents now have graphics layers both in front of and behind the text layer, so users can put logos or text, such as "draft" or "copy," in the background. In addition, a freehand drawing tool, vertical rulers and a command that lets users control the offset between a graphic and text wrapped around it have been added.
- **New shortcuts.** Rulers can be named and listed in a "pop-down" menu, and 125,531 combinations are now available for custom keyboard equivalents. Style sheets now support paragraph as well as character formatting.
- **Non-contiguous selection.** Non-contiguous sections of a document can be selected and modified globally. A Find All command added to the program's already feature-rich search-and-replace options selects all occurrences of the desired expression or style.
- **A programming language.** To supplement the macro language built into earlier releases of Nisus, Version 3.0 comes with a BASIC-like programming module with which advanced users can add custom functions to the program. Paragon now offers a fee-based macro-writing service.

Like earlier versions, Nisus 3.0 provides unlimited Undos, multiple clipboards, and a built-in thesaurus and spelling checker.

The new version can read and write files in Microsoft Word 3.0 and 4.0 formats unless they were saved in Fast Save form.

Upgrades will be $65 or free to customers who purchased an earlier version after June 1.

Paragon Concepts Inc. is located at 990 Highland Drive, Suite 312, Solana Beach, Calif. 92075; (619) 481-1477. □

ResEdit Reference available

Boston — Apple and Addison-Wesley Publishing Co. last week announced ResEdit Reference, a 176-page guide to ResEdit Version 2.0b2, the latest release of Apple's standard utility for creating and editing such Mac resources as menus, dialog boxes and icons. Available now for $12.95, the book will be distributed to developers through the Apple Programmer's & Developer's Association and to bookstores by Reading, Mass.-based Addison-Wesley Publishing Co. □

Ventura taps Mac publishing market

Program targets long documents

By Carolyn Said

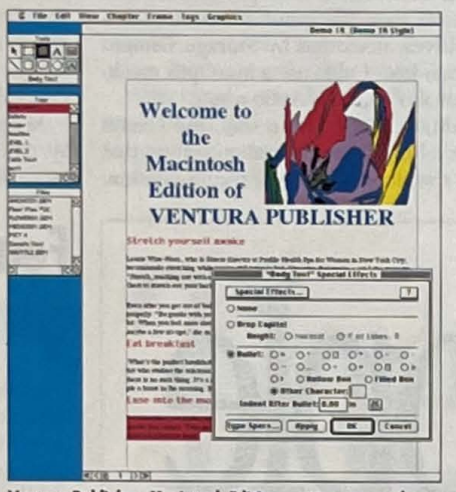
Boston — Ventura Software Inc. last week made a bid for the Mac publishing market, betting on several aces in the hole: a huge IBM PC user base, mixed-network capabilities and powerful long-document features. Ventura Publisher, Macintosh Edition, unveiled at Macworld Expo, is scheduled to ship by year-end for $795.

"Ventura is excellent for technical writing and other types of business communication with large degrees of revision," said beta-tester Harry A.B. Shapiro, systems manager at Warwick, Baker & Fiore, a New York-based advertising firm.

Although Shapiro said he felt the program fully uses the Mac interface, it does have several shortcomings on the design end, including the inability to handle color other than spot color, lack of horizontal type scaling and poor graphics integration, according to Shapiro and Jonathan Seybold, publisher of Malibu, Calif.-based Seybold Reports.

But it offers features to automate production of long, structured documents, such as technical materials, proposals, books and manuals.

▸ Long-document features include automatic cross-referencing, footnoting, global renumbering of linked documents, and table-of-contents and index generation.



Ventura Publisher, Macintosh Edition, automates production of long, structured documents. Typographic features include automatic drop caps and bullet characters.

▸ Workgroup-publishing features include bidirectional live links between Ventura Publisher files and associated word processing and graphics documents, the capability to keep text and graphics files on a server, and full file compatibility with the MS-DOS and forthcoming Unix versions of the product.

▸ Technical-document features include a built-in table editor and equation generation.

▸ Typographic features include style-sheet control, tracking and kerning, automatic drop caps, and vertical justification. An Apply button lets users preview changes made via dialog boxes.

▸ Word processing features include hyphenation, a spelling checker and text-editing tools, but no search-and-replace feature.

▸ Graphics features include the capability to anchor graphics to text, halftone screening for PostScript printers, and rotation of text and graphics in 90-degree increments.

All dialog boxes are movable so that users can easily preview the effects of formatting changes.

Ventura Publisher, along with Frame Technology Corp.'s recently released $995 FrameMaker for the Mac, will establish the Mac as a legitimate platform for long documents, Seybold said. "Apple has never had a good long-document publishing program [before Ventura and Frame]," he said. Interleaf Inc.'s Interleaf Publisher failed to claim that market because of its lack of a true Mac interface, he said.

Ventura also will vie with Aldus PageMaker, the only other popular desktop publishing program that runs on both Macs and IBM PCs, for mixed Mac-PC networks, experts said. Observers say it is unlikely to encroach on the territory staked out by PageMaker, QuarkXPress and Letraset's DesignStudio for design-rich DTP documents, however.

Ventura Software Inc. is at 15175 Innovation Drive, San Diego, Calif. 92128; (619) 673-7524. □

PixelPaint Pro adds array of editing, texture tools

By Connie Guglielmo

Boston — SuperMac Technology will ship in October a new version of PixelPaint Professional that expands the 32-bit color program's palette of color tools and painting capabilities.

New features in Version 2.0, to be priced at $799, include:

▸ Support for large and multiple documents. Incorporating a new virtual-memory screen, PixelPaint Professional lets users auto-scroll through images up to 4 Kbytes by 4 Kbytes and open as many documents as hard disk memory allows.

▸ Eight-bit masking. Semitransparent masks can be created from any brush, tool or image.

▸ Wet Paint, a feature that lets users create, edit and reposition text and objects before pasting them down into the paint layer.

▸ Image-processing tools to adjust brightness, contrast and color.

▸ Pressure-sensitive tools. Using graphics tablets from Wacom Inc. of Paramus, N.J., users can simulate pencil, brushes, airbrushes, water drop, charcoal and other media.

PixelPaint Professional is one of a growing number of graphics programs that supports pressure-sensitive tools. Others include Adobe Systems Inc.'s Photoshop, Silicon Beach Software's Digital Darkroom 2.0, Creative Software's Easy Color Paint 2.0, Electronic Arts' Studio/32 and Time Arts Inc.'s Oasis.

▸ Document controls, including Ruler, Grid, Coordinates and 16 levels of zoom.

▸ A Gradient Editor for creating color ramps with multiple, adjustable anchor points.

The program also offers a feature called PixelPaper, backgrounds that work like textured canvases. It will ship with canvases that simulate charcoal paper, concrete, linen and slate.

PixelPaint Professional requires a color-capable Mac II machine with System 6.0.5 or higher and 2 Mbytes of RAM.

Users who purchase PixelPaint Professional 1.0 between Aug. 1 and Dec. 1 will be upgraded free. Registered owners can upgrade for $125; PixelPaint owners can trade up to Version 2.0 for $299.

SuperMac Technology is located at 485 Potrero Ave., Sunnyvale, Calif. 94086; (408) 245-2202. □

PixelPaint Pro 2.0 now can display multiple documents. Other new features include document controls, such as Ruler and Grid, and a Wet Paint feature that lets the user edit and manipulate text and objects before pasting them into the painting.

FileMaker Pro for Windows 3.0 on the 1991 horizon

By Daniel Farber

Boston — Windows 3.0 development at Claris Corp. is alive and well, even though Apple has retaken control of its software company.

Claris officials declined to comment, but sources here said that the company will deliver a Windows 3.0 version of FileMaker Pro as early as the fourth quarter of 1991.

In the seven weeks since Claris was reeled back into Apple, many industry observers speculated that one of Apple's motives for the sudden move was to kill efforts to deliver Windows applications. But Claris officials have consistently said not to count out Windows development.

"Database is a critical area for multiplatform development. FileMaker for Windows is certainly not out of the question," said Claris President Bill Campbell during a panel at Macworld Expo here last week.

According to the sources, the lack of a cross-platform database strategy has locked Apple out of key corporations because customers with mixed networks are seeking consistent, flexible tools for data integration, not just file compatibility. Apple apparently believes that Windows versions of Mac databases are necessary for the Mac to make serious inroads in the critical database area.

FileMaker Pro, the Mac version of which is now scheduled for release next month, is the only current Claris application that will be ported to Windows, sources said. The program is an enhanced version of the most popular flat-file database on the Macintosh, with more than 50 percent market share in the category, according to a MacWEEK survey.

Claris also is expected to extend the capabilities of FileMaker Pro within the next two years by developing a relational database engine compatible with the product.

In addition, Claris is considering developing a runtime version of HyperCard for Windows, which would allow Mac-based stacks to run on IBM PCs and compatibles. Apple and Claris seem prepared to do battle with Microsoft as a system software vendor.

"The Mac has been isolated in certain areas," said Dan McCammon, general manager of the applications group at Claris. "Apple realizes that Microsoft is the real competition and that we have a bigger future than the Mac Toolbox."

Analysts suggested said Claris and Apple are betting that, beyond System 7.0, a new processor-independent operating system, user interface and CPU architecture based on the Motorola 88000 RISC (reduced instruction set computing) processor will provide the firepower to battle Microsoft on the system software front in the mid-1990s. □

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BPA

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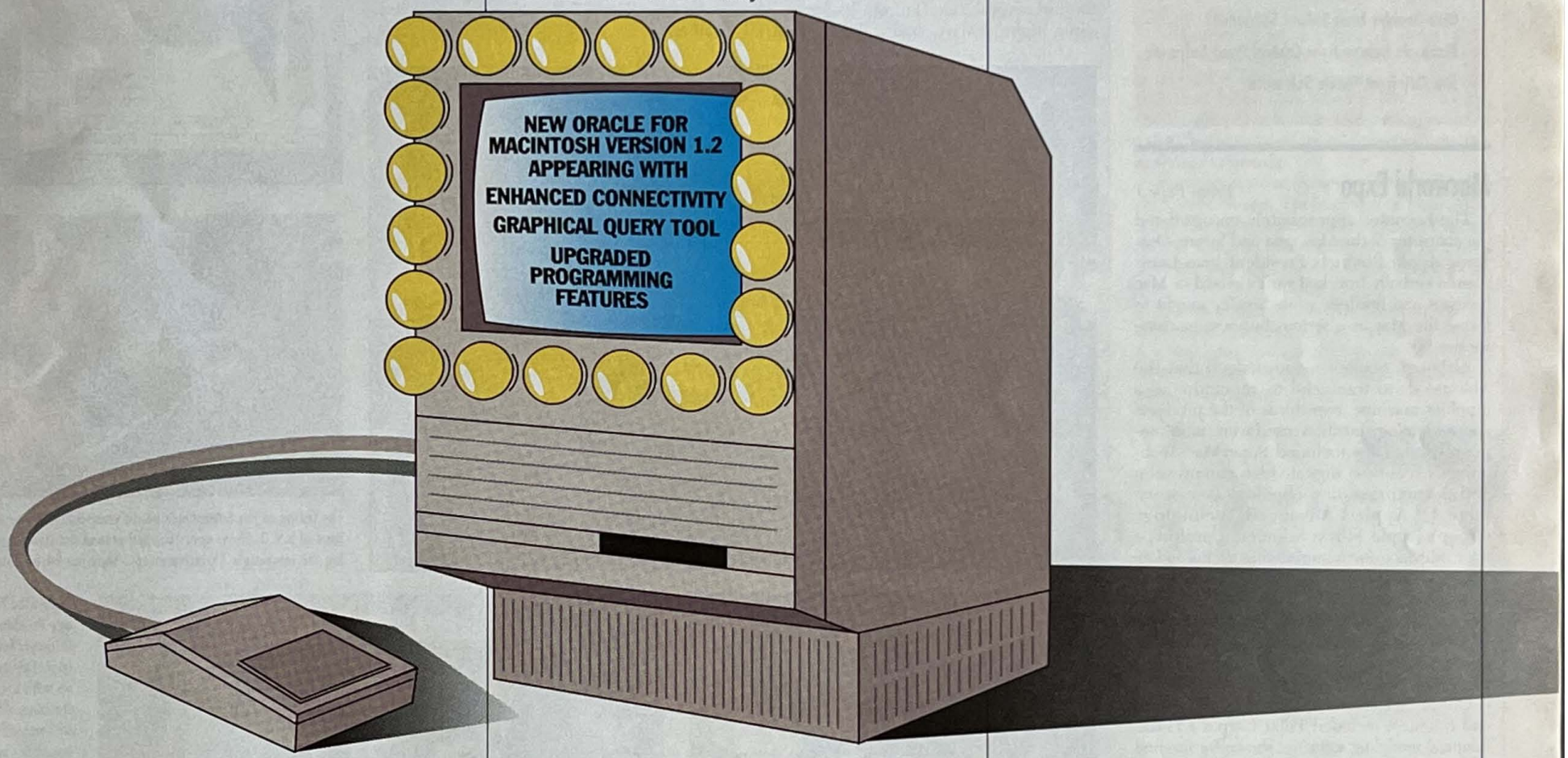
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Show-floor best sellers

Part of the flavor of Macworld Expo comes from Mac resellers doing brisk business from booths on the show floor. An informal survey of three resellers the morning of Aug. 9 turned up this list of show favorites:

- QuarkXPress 3.0
- Wacom tablets
- SIMMs (all brands)
- Screen savers Pyro, After Dark and FlowFazer
- NoRad screen filters
- Correct Grammar from Lifetree Software
- Wayzata Technology CD-ROMs
- Disk Doubler from Salient Software
- MacTools Deluxe from Central Point Software
- Sim City from Maxis Software

Macworld Expo

From Page 1

The keynotes appropriately encapsulated the character of the Mac, past and future. Outgoing Apple Products President Jean-Louis Gassée verbally frolicked with a crowd of Mac honchos and insiders, while Sculley sought to frame the Mac as a serious business machine for the '90s.

Although Sculley acknowledged that the Mac needs to transcend its reputation as a graphics machine, two-thirds of the products and technology he showcased were multimedia-related. They included SuperMac Technology's real-time digital-video compression and decompression technology (see story, Page 1); Apple's Advanced Technology Group's Apple Movie Scanner, a prototype user interface for manipulating digital video; MacroMind Inc.'s MediaMaker; Digital F/X's Video F/X, a professional-quality video production system; ABC News InterActive's HyperCard 2.0-driven interactive videodisc about AIDS; and Beyond War's Earthquest, a HyperCard stack on the environment.

On the business side, Sculley's list of the best and brightest included Pillar Corp.'s FYPlan, financial modeling software, shown for the first time in public (see story, Page 1); Group Technologies Inc.'s Aspects 1.0 network conferencing software; and Caere Corp.'s Typist, a handheld optical character recognition scanner.

As the Mac market becomes more corporate, users note changes in the expo atmosphere. "It seems to be lusher than ever. Things are more sophisticated than ever," said Fernando Corbato, professor of computer science at the Massachusetts Institute of Technology in Cambridge. □

Notebook

From Page 1

surement devices. The company's big guns tried to lure the unwitting into wheeling the weapon around the floor to detect monitor emissions in other booths.

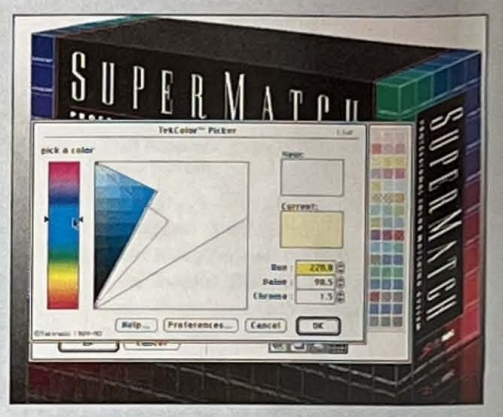
With all the scare about screen emissions, some show goers suffered Chernobyl shock under the ultraviolet lights posted at the entrances. Invisible, glow-in-the-black-light strips adorned official badges to keep budget-minded "Maciacs" from desktop publishing their way into the show.

▸ **Crimes and punishments.** Lapis woke up Thursday morning to the tune of "So Long, Macs, It's Been Good to Know Ya." The company was feeling blue over the theft of several Mac IIs from its booth. The same night, BMUG had a dozen tie-dyed shirts stolen from its World Trade Center booth.

Apple offered hands-on previews with a simulation of HyperCard 2.0 as well as buttons that read "Faster" and "Smarter." As of last week, HyperCard 3.0 had passed its 40th beta, but developers said it still lacks features. Jean-Louis Gassée called it "VaporCard."

▸ **Far out.** The real sensory orgy was tucked into a corner of the World Trade Center: A slick, marblelike media cube by Swiss multimedia guru Dent-de-Lion du Midi, it ran on a IIcx with 3-D, 24-bit real-time video; 16-bit digital sound; laser-disc and CD players; and a bi-amped titanium sound system with its own eight-channel digital mixer. The virtually virtual-reality obelisk, with an all-too-realistic price tag of $50,000, comes custom designed for touch-screen displays.

A winner in the enticing company name



SuperMac Technology's ColorMatch color calibration and matching system (right) is built around TekColor software licensed from Tektronix.

The Wang Center (below) was full of bright lights, scaffolding and Macintosh enthusiasts eager to hear Gassée's swan song and watch Sculley play with the latest Macintosh toys.

The theme at the E-Machines booth was rock'n'roll to the tune of S.R.O. Show goers bopped around the floor, eyeing the company's 16-inch monitors showing 24-bit color.

CAD users got the big picture at HP's booth, where the company's pen plotter was shown working with Palomar's PLOTTERgeist driver.

SuperMac Technology President Michael McConnell (right) chats it up with Bruno Davoine, directeur of Symbiotic, based in Charenton, France. Behind them, SuperMac's wall of monitors casts an eerie glow over the proceedings.

RICK FRIEDMAN/BLACK STAR

Advice panel

From Page 1

cern about Apple's seemingly unstable management team and lack of innovation in the user-interface arena.

Symantec CEO Gordon Eubanks characterized Apple as a system-software company, not "an aluminum sheet-metal bender with parts inside." The risk facing Apple, he said, is letting Microsoft with Windows become a second source for Mac system software.

Mike Maples, vice president of the application software division at Microsoft, encouraged Apple to develop a multiplatform development system; Eubanks suggested that Apple support Mac developers doing Windows applications.

"It's a customer-driven mandate to have software work across platforms, and it helps if developers can reach the other 90 percent of the market," Eubanks said.

Sculley did not respond to the advice in his keynote address, but in an interview later he acknowledged that the panelists offered some good ideas. He added that Apple management is more stable than people realize, but allowed that Apple hasn't addressed the broad horizontal marketplace well.

"We kind of got adrift after 1987, homing in on graphics," Sculley said. "The key to resolving the problem is lower-cost products. In 1991 it should be pretty clear to people whether we succeeded [in addressing the issues]." □

Pillar

From Page 1

Targeted at companies with annual sales of $10 million and more, the program also provides integrated financial statements, graphs, user-definable search and sort criteria, and customizable reports.

A configuration and security system allows managers to control user access to budgets and reports. The program maintains a log of activities within the system.

"It should be very successful," said Peter Rogers, analyst at Robertson, Stephens & Co. in San Francisco.

"It's a product that does something most people now try to accomplish with spreadsheets, which aren't really optimized for that purpose," Rogers said.

FYPlan also received the endorsement of Apple CEO John Sculley during his keynote presentation at the expo.

Apple also is a minority investor in the company.

Pillar officials said FYPlan will be released at the beginning of the fourth quarter. Pricing has not been set.

The company plans to sell FYPlan direct to customers through a nationwide seminar series.

Pillar Corp. is located at 950 Tower Lane, Suite 400, Foster City, Calif. 94404; (415) 349-6200; (800) 475-6226. □

As one unemployed Mac head to another, Guy Kawasaki presented Jean-Louis Gassée with a final farewell gift: a Sony Walkman, "inspired" by Gassée's design for the Macintosh Portable.

category, Swamp Gas Software announced Black Hole, a new utility that can compress a 600-Mbyte hard disk into less than 2 cubic inches. Based on technology from one of the nation's leading automobile recyclers, the less-than-$1,000 cruncher claims total security. "Even the National Security Agency can't get at it," said a company representative.

For people who say the Mac is a toy, Joint Ventures Woodworking of Cambridge, Mass., had just the plaything: controls that let anything drawn on the Mac screen show up on the panel of an Etch-A-Sketch. John Goodman, its inventor, uses it to preview woodcuts. "Just a shake and it's gone," he said. Apple's Chris Espinosa rated it best of the show.

▸ **Not gone and not forgotten.** Gassée's final farewell tour continued full steam as he hosted his own version of The Tonight Show at Macworld Expo, grilling a lineup of Mac luminaries on topics both serious and frivolous. As slickly orchestrated as any of the glitzy product rollouts under his regime, the keynote opened with a video montage of Gassée's years at Apple that included a brief, almost subliminal shot of Apple employees picketing to protest his departure.

▸ **Graft, goodies and gifts.** Where has all the good graft gone? Water guns from Adobe and Day-Glo wrist packs from Silicon Beach made a splash, but the lack of other good gimmies kept shopping bags light.

Some virgin show goers were wide-eyed with wonder about the giveaways. "It's like a circus. People are giving things away. You can't stop for two seconds without getting stuff handed to you," said a Boston-area first-time attendee.

Even the big guys got into the gift game: Guy Kawasaki bestowed two final-farewell gifts on Gassée. A giant boombox was purportedly a new Sony Walkman inspired by the Mac Portable. An extra-special gag gift was a golden muzzle aimed to round out his golden-parachute and golden-handcuff collection.

"If we had given this to you earlier, you might still have your job at Apple," Kawasaki quipped, jesting that the muzzle was from Sculley.

▸ **Weather.** Although the sun didn't shine, the halls were still sweaty, packed with bodies and equipment. There was no air conditioning for the hapless crews moving in 1.5 million pounds of Macintosh stuff.

▸ **True Blue, after all?** Both the intersite message system and the high-tech, ad-filled video wall were controlled by IBM PCs. So much for the all-Mac trade show.

▸ **Games people play.** File. Edit. View. Labels. San Jose. That was the answer at the Mac Jeopardy parody show before the Gassée keynote. The Mac-industry contestants were clueless. The question: Where is System 7.0?

▸ **Innocent bystanders.** Even service providers struggling to keep the crowds happy were upbeat about the expo. "I always look forward to Macworld," said Bill Fox Jr., president of Fox Tours, which handles the shuttle buses. "No other convention has this flavor. You see people here in $500 suits and tie-dyed shirts, and they all look happy. I've never made it inside [the show halls], but whatever they do in there, they must enjoy it." □

Three years ago in MacWEEK

Aug. 18, 1987: "If the PostScript alternatives to Adobe's PostScript interpreter are successful, much-hoped-for price reductions in PostScript language laser printers may be in the offing — good news in anyone's language."

In retrospect: PostScript clones and reduced licensing fees for the Adobe original have indeed forced down printer prices. A new battle between Adobe Type Manager and Apple's TrueType has complicated the picture, since PostScript often is no longer necessary to obtain high-quality output.

Compression

From Page 1

Company officials said their goal is symmetrical compression and decompression, meaning compression time will be the same as decompression time.

SuperMac hopes to release the board, which will run with a modified version of the company's Spectrum/24 PDQ accelerated 24-bit color-display board, in the first half of next year for less than $2,000, according to Steve Edelman, founder and chief scientist of SuperMac. Developer kits will be available this fall.

"We want to drive down the cost of showing video on the Mac," Edelman said. "We've used custom silicon to make video a mass-market product."

The software, SuperMac said, will conform to the Joint Photographic Experts Group JPEG standard, a still-image compression standard under development by two international standards groups.

In its demo on the show floor, SuperMac decompressed video that had been stored on the company's new $6,499 LaserFrame optical storage device. The video takes up about 20 Mbytes per minute; LaserFrame cartridges are capable of holding 30 minutes of data.

The video was running in a fixed 512-pixel-by-304-pixel window on a standard Apple 13-inch monitor for the demo, but the company said that it plans to boost the resolution to 640 by 480 pixels and allow for resizable windows when the board is released. Users also should be able to cut, copy and paste live video without any additional hardware.

SuperMac President Mike McConnell said the compression board will work with any storage device, either magnetic or optical. Real-time display, however, will not be possible from current magnetic storage devices, he said, because their data transfer rates are insufficient.

While about 60 to 70 minutes' worth of compressed video could be put on CD-ROMs, users would sacrifice play back speed and image resolution because of the limitations of CD-ROM technology.

Apple and SuperMac are not the first companies in the Mac market to explore compression technology. Both C-Cube Microsystems Inc. of San Jose, Calif., and Micron Technology Inc. of Boise, Idaho, have introduced compression/decompression systems for the Mac.

Although designed for still images, C-Cube's custom compression chip and JPEG-compliant software is fast enough to handle real-time video (see MacWEEK, Feb. 20). C-Cube hopes to market its technology on an OEM basis to vendors of scanners, printers and display boards.

Micron's system, developed in collaboration with Storm Technology, a Palo Alto, Calif.-based software developer, is limited to still images. The $2,000 board is scheduled to ship in September (see MacWEEK, Aug. 7).

Edelman speculated that image-compression chips, such as those available from C-Cube, may eventually be put on a $500 daughterboard that fits onto a SuperMac video graphics card. □

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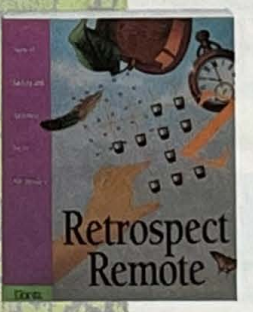

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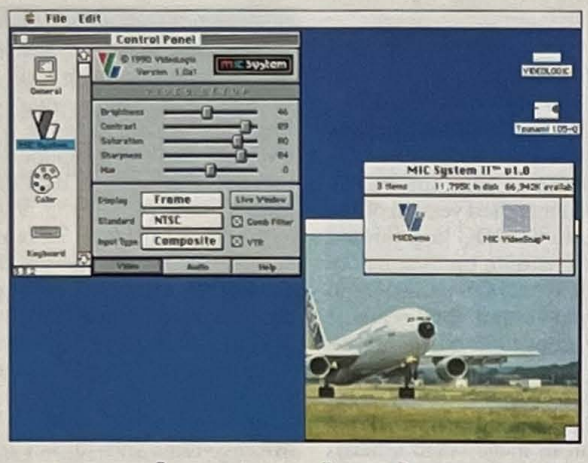


VideoLogic's M.I.C. System II software controls the company's DVA-4000/Macintosh video adapter from the Mac's Control Panel. Video can be displayed in 24-bit color, in any size window and in real time.

VideoLogic adapter displays 24-bit video, eight-bit graphics

By Connie Guglielmo

Boston — VideoLogic Inc., a 6-year-old video board maker for the IBM PC, switched on new Mac video and multimedia tools at Macworld Expo here last week.

The DVA-4000/Macintosh, due in October for $3,000, is a full-motion video adapter for the Mac II family. The digitizer, which is bundled with a dedicated eight-bit color display card, can capture a variety of video signals, including NTSC (National Television System Committee), PAL (a European video standard), Super VHS and RGB (red, green, blue) component video.

Video can be displayed in 24-bit color, in any size window, in real time (30 frames per second) on a standard Apple 13-inch color monitor, according to Kirke Curtis, general manager of North American operations for VideoLogic. The video window can be scaled down to any size, including a 40-by-40-pixel icon, while maintaining high-resolution quality, Curtis added.

While Mac graphics are displayed by the graphics card in eight-bit color, video is displayed in 24-bit color by the video adapter. "Since we treat video separately, we don't have to send it over the NuBus, and the whole process is a lot faster," Curtis said.

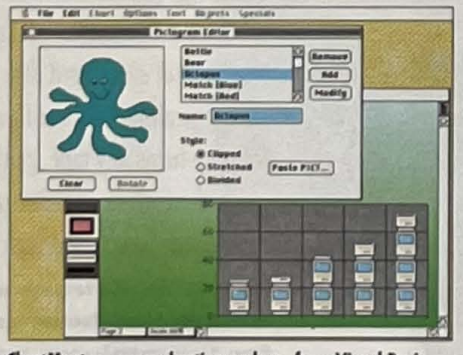
VideoLogic also will announce the M.I.C. (multimedia interactive control) System II, software with media device drivers that can be used to create multimedia presentations. The software, which will be bundled with the DVA-4000, is hardware-independent and runs on IBM PS/2, PC AT and PC XT systems.

VideoLogic Inc. is located at 245 First St., Cambridge, Mass. 02142; (617) 494-0530. □

ChartMaster creates effects, 3D

By Carolyn Said

Boston — Charting an altered course, Visual Business Systems Inc. unveiled ChartMaster, a new charting package, at Macworld Expo here last week.



ChartMaster, a new charting package from Visual Business Systems, includes a pictogram editor that lets users import any object and use it to represent graph elements.

The program will replace the company's Visual Business No. 5, a presentation package with extensive charting capabilities.

Users can generate 2-D and 3-D charts and graphics with the program by entering or importing data into its spreadsheet. The program will import WKS, Excel 2.2, SYLK or ASCII files.

ChartMaster includes a pictogram editor that lets users import graphics objects to represent relative quantities. It supports PICT, PostScript and Encapsulated PostScript formats.

Special effects include backdrops merged with overlay charts, graduated backgrounds, full rotation of text and graphs, and gray-scale shading.

ChartMaster will ship in October for about $295, VBS said. Visual Business No. 5 users will be able to upgrade for a not-yet-determined price.

Visual Business Systems Inc. is located at 380 Interstate North, Suite 190, Atlanta, Ga. 30339; (404) 956-0325. □

Apple's presence felt at Siggraph

Video compression may be part of OS

By Connie Guglielmo

Dallas — Apple may have been relegated to a booth in the far corner, but the Mac was all over the map at Siggraph '90 here last week.

The annual mecca for computer-graphics developers, Siggraph also gave Apple an opportunity to showcase new graphics technologies being developed by its Advanced Technology Group, including video-compression software that may be part of future operating systems.

In its booth, Apple demonstrated proprietary video-compression software that was shown playing digitized color video and audio from a hard disk in multiple, movable, resizable windows on the Mac screen. Although it is still just a technology being worked on by ATG and not a sanctioned project, Apple said the software is viewed as a possible extension to 32-bit QuickDraw that may be incorporated into system software by late 1991.

"Video compression is one of the Holy Grails of multimedia," said Hugh Hempel, Apple marketing manager for technical markets. "We see it as one of the strategic components of a multimedia computer and as an operating system issue."

That Apple is serious about incorporating multimedia technologies — sound, video and advanced graphics handling — into the Macintosh system also is reflected in recent company ads seeking video, graphics, sound and imaging engineers (see MacWEEK, Aug. 7).

Another ATG demonstration showcased radiosity, techniques for creating photo-realistic images. Radiosity takes into account the way objects absorb and reflect light and the cumulative effect on a scene. Using a new technique called Incremental Radiosity, which allows the computer to recalculate only areas of change rather than recreating a new scene every time an object is moved, Apple was able to modify full-color, 3-D scenes interactively and quickly.

On the show floor at the three-day conference, Macintoshes dotted Pixar's high-profile booth, where the company demonstrated three new Macintosh products that work with its MacRenderMan photo-realistic rendering software, including its Showplace picture-composition software (see MacWEEK, Aug. 7).

Apple also had three entries in the nightly Film and Video Theater. Mac-based multimedia presentations, including a new educational presentation about invertebrate animals (see related story, this page), dominated the show's Hypermedia exhibit. □

Highlights from Siggraph '90

New graphics products for the Mac covered the full spectrum — from rendering to new 3-D display technology — at Siggraph '90 in Dallas last week:

▸ Dimension Technologies Inc. of Rochester, N.Y., is shipping an LCD display that uses patent-pending technology called "auto-stereoscopy" to show stereo 3-D without 3-D glasses.

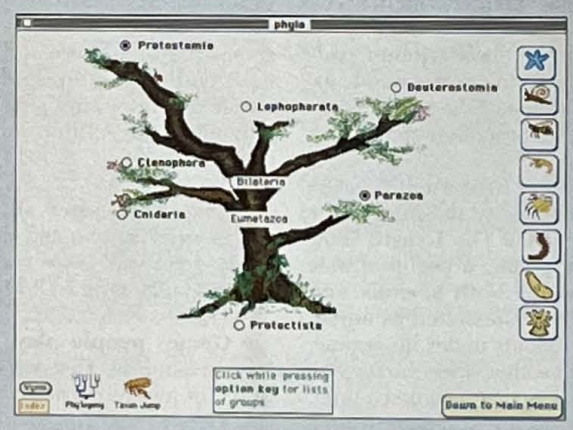
The $7,500 DTI 100M supports a resolution of 640 by 480 pixels and 16 gray levels, which can be dithered to simulate 32 gray levels. Images are projected in 3-D, 8 to 10 inches off-screen.

The DTI 100M ships with a 3-D drawing program developed at North Carolina State University that lets users create and modify stereo 3-D objects using the display.

It also ships with Dimension's Developer's Stereo Toolkit 2.0, which includes a 3-D Application Interface Kit and FILEX file-exchange software for developers who want to adapt their 3-D applications for stereo display. Also included is 3-D Stereo Cursor software that turns any input device, including a mouse or keyboard, into a cursor that can move in 3-D space.

A 512-color version of the LCD will be released later this year for about $10,000, according to Dimension.

▸ Byte by Byte Corp. of Austin, Texas, announced two modules that work with its $1,500 Sculpt 3D modeling program: a texture-mapping editor will ship in September for $1,000, while a $1,000 animation module is due in October.



Genda Systems' new $495 educational CD-ROM, called Metazoa: Vanishing Kingdom, includes sound, animation, 3-D models and photographs of more than 30 phyla.

▸ Eastman Kodak Co. of Rochester, N.Y., is licensing a special version of its $179 Colorsqueeze compression and decompression software to Mac developers. Colorsqueeze shrinks 24-bit color images at compression ratios of 5-to-1, 8-to-1 and 14-to-1 (see MacWEEK, April 10).

The stand-alone, decompression-only version is available for a one-time licensing fee of $1,500. With it, developers can compress images to fit on floppy disks or CD-ROM discs and distribute the decompression software to users royalty-free, Kodak said.

▸ Ithaca Software of Alameda, Calif., announced a new version of its HOOPS Graphics Systems 3-D graphics-development environment.

The new version can be called from Macintosh Programmer's Workshop C and C++ and is compatible with MacApp. HOOPS/MPW also supports Apple's Display Card 8•24GC, according to Ithaca. A single-user license of HOOPS is $1,250.

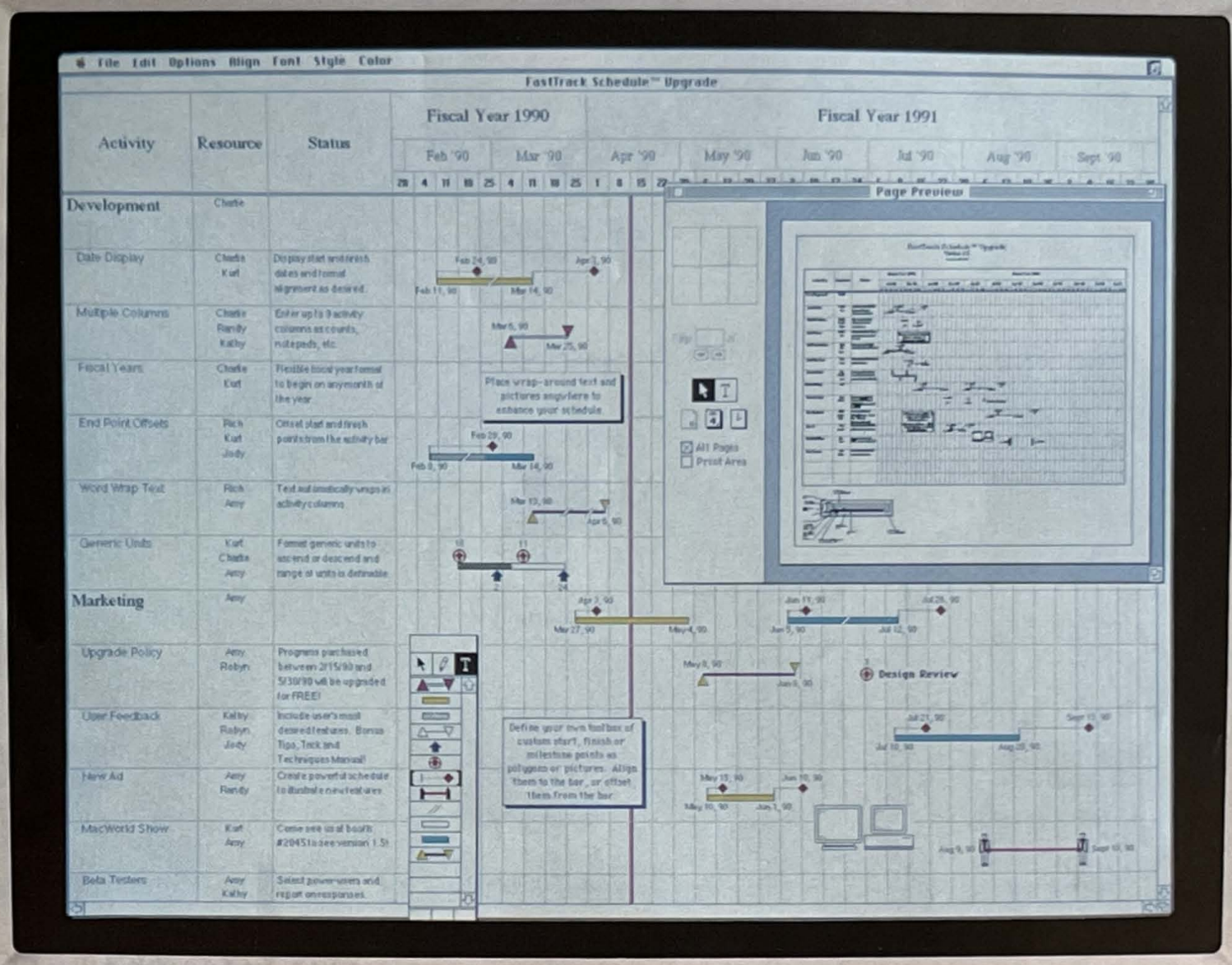
▸ Lyon Lamb Video Animation Systems Inc. of Burbank, Calif., announced ProVAS, an external device for outputting Mac graphics and frame-accurate animations to videotape. It is due in the fourth quarter for less than $7,000.

▸ Diaquest Inc. of Berkeley, Calif., introduced a network-based version of its DQ-Animaq video control board. Called the Diaquest ImageNode, it gives Mac users on an Ethernet network remote control of videotape recorders for video input and output. Pricing has not been determined.

▸ An interactive educational program about invertebrate animals will be available in September on a CD-ROM from Genda Systems of Melbourne, Fla. Called Metazoa: Vanishing Kingdom, the $495 presentation contains 80 Mbytes of sound, animation, 3-D models and photographs of more than 30 phyla.

The presentation should be played from a hard disk to preserve animation speed, said Metazoa creator Kerry Clark, a professor at the Florida Institute of Technology. Clark is offering it to museums and universities for a $1,000 site-license fee. — *By Connie Guglielmo*

FastTrack Schedule™



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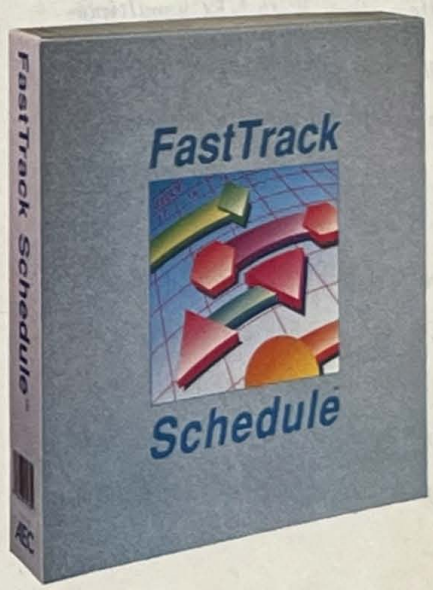

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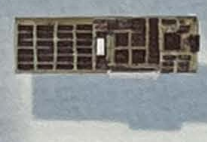
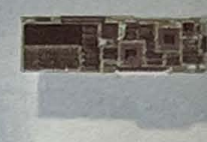
Generation X Color 24gz60



Control Systems ARTIST Mac10



Truevision NuVista® 1M, 2M, 4M

Micron Tech Xceed NB6-48

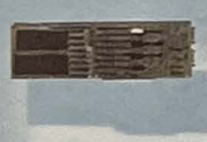
RasterOps® ColorBoard 224

RasterOps® ColorBoard 264

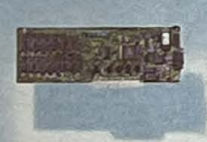
PCPC CGCII/32

Micron Tech Xceed SE/3010-78

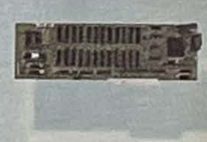
Generation X VII



Truevision, HR 2M, 4M



Apple Macintosh II Video Card



PCPC CGCII/8

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MultiSync GS2A *Superior gray-scale monitor, 14" flat-surface screen. Supports the Macintosh II video card and compatibles. Ideal for desktop publishing.*

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NEC

Photone adjusts to color presses

Hyphen software tailored for dailies

By Carolyn Said

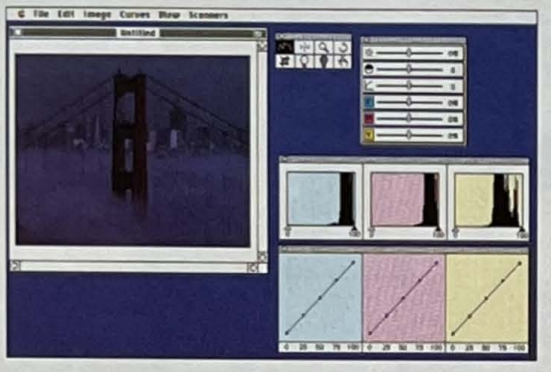
Boston — Photone Pre-Press, a program unveiled by Hyphen Inc. at Macworld Expo last week, offers high-level color correction and separation features in a hurry.

Users "fingerprint" the software to their output devices and presses, adjusting for such press variables as variations in inks and dot gain. Once calibrations are built in, Photone automatically compensates for them.

"It's extremely sophisticated, but after you have it set up, you don't have to be an RIT [Rochester Institute of Technology] grad to use it," said Jim Bye, director of graphics and electronic pre-press at the Evansville (Ind.) Courier. Bye used a beta version of Photone for a year to produce about 50 color pages per week for two daily newspapers.

"You spend a lot less time fiddling with the photos," he said. "For 90 percent of the photos, you can go in and do all the work in 10 minutes."

Intended for newspaper production, Photone was developed by three newspaper veterans. "You could tell they knew what newspapers need," Bye said. "Newspapers have to tailor all their pre-press, particularly color work, to their press. Otherwise, the pressmen go crazy trying to make it work."



Photone Pre-Press offers a variety of palettes for adjusting color values. The color correction and separation software is designed for environments with quick turnaround times, such as newspapers.

Photone has controls for color correction, cropping, sizing, bordering, unsharp masking, UCR (under color removal) and GCR (gray component replacement). It can map reproduction tones in the shadow, quarter-tone, midtone, three-quarter-tone and highlight positions for cyan, magenta, yellow and black. It adjusts screen angles, frequency and dot shapes to eliminate moiré effects.

The program does not offer many photo-retouching features, such as the capability to move objects around. "Newspapers shouldn't be [digitally manipulating content] anyway," Bye said. "But it works really well with Adobe Photoshop if you need to alter photos."

Photone is due next month for about $5,000, Hyphen said.

Hyphen Inc. is located at 187 Ballardvale St., Wilmington, Mass. 01887; (508) 988-0880. □

NEC PostScript laser boasts 6-ppm engine at $2,495

By Pamela Pfiffner

Boxborough, Mass. — NEC Technologies Inc., which was among the first printer manufacturers to license Adobe PostScript in 1987, made its bid for the low-cost PostScript market with the introduction last month of a model listing for less than $2,500.

Due Sept. 1, NEC's Silentwriter2 Model 90 is rated at 6 pages per minute and includes 35 Adobe fonts. Priced at $2,495, the printer is positioned between 4-ppm printers like GCC Technologies Inc.'s new $2,399 Business LaserPrinter II, which also has 35 fonts, and the 6-ppm Texas Instruments $2,644 microLaser PS17, which has 17 fonts.

NEC said the printer's low price stems in part from more efficient manufacturing of its PostScript controller, which uses PostScript Version 52.2. The Silentwriter2 Model 90, based on a 16.67-MHz 68000 processor, ships with 2 Mbytes of RAM that can be expanded to 4 Mbytes for $995. Its Minolta engine is rated at 6,000 pages per month for a total of 180,000. The single-unit toner cartridge and photo conductor has a life span of 8,000 pages.

The printer includes interfaces for AppleTalk and standard parallel, RS-232C and RS-422 serial ports. It also offers Hewlett-Packard LaserJet IIP emulation and 13 HP fonts.

NEC provides a support kit of screen fonts for the printer's resident Adobe and HP fonts.

NEC Technologies Inc. is located at 1414 Massachusetts Ave., Boxborough, Mass. 01719; (508) 264-8000. □

Price of 6-ppm laser printers edging down

NEC and Sharp set new price point

PRODUCT	APPLETALK INTERFACE	PRICE
NEC Technologies Silentwriter2 90	Included	$2,495
Sharp Electronics JX-9500PS	Costs extra	$2,995*
Texas Instruments microLaser PS35	Costs extra	$2,999
Qume CrystalPrint Publisher II (PostScript clone w/Type1)	Included	$3,995

*All printers include 35 fonts. *Pricing tentative*

Sharp competes with compact PS printer

By Pamela Pfiffner

Boston — Sharp Electronics Corp. last week unveiled a compact, affordable PostScript printer that the company said is one of the smallest on the market.

Expected to be priced at less than $3,000, the JX-9500PS uses Sharp's 6-page-per-minute, 300-dpi print engine and the same PostScript controller used in Texas Instruments Inc.'s microLaser printers. The unit is scheduled to ship in October.

The printer measures 13.4 inches wide by 14.2 inches deep by 10.5 inches high, taking up just 1.33 square feet of desktop real estate. It includes 35 Adobe fonts, 14 Hewlett-Packard fonts and slots for two additional Sharp font cards.

The JX-9500PS has several paper-handling options. It ships with a built-in 250-sheet letter-size cassette. A second bin with a feeding mechanism that fits under the printer can be added for $345.

Additional 250-sheet input trays for letter, legal, invoice, A4, B5 and executive sheets are $69 each, as is a 40-envelope tray. In addition, envelopes, labels and other items requiring a straight paper path may be fed manually.

The printer comes with a parallel interface. AppleTalk and RS-422 and RS-432 serial interfaces may be ordered as options, but pricing has not yet been set. A front panel lets users choose emulations, paper trays and other options.

The JX-9500PS ships with 1.5 Mbytes of RAM, which can be upgraded to 4.5 Mbytes. A 1-Mbyte expansion kit is $459; a 2.5-Mbyte kit is $1,149.

Sharp Electronics Corp. can be reached at Sharp Plaza, Box F, Mahwah, N.J. 07430; (201) 529- 9600. □

News BRIEFS

New BackFAX gives AppleFax users software to lean on

Williston, Vt. — At least one third-party developer is making a special offer to orphaned owners of AppleFax, the fax modem axed from Apple's product line last month.

Along with plans for a new version of its BackFAX for AppleFax software package, Solutions Inc. announced a rebate offer aimed at owners of the ill-fated Apple hardware. Anyone buying the $245 program between July 26 and Nov. 1 will receive a $25 rebate from Solutions.

The $699 AppleFax came with software, but it did not support background sending and receiving of fax messages; users had to purchase BackFAX to get such capabilities. The Apple software will not be updated.

The new release of BackFAX, Version 1.5, allows creation of a single fax from multiple documents, automatically restarts in whatever send and receive configuration a user specifies, and supports manual dialing, among other enhancements. Upgrades are free to users who purchased BackFAX after May 26 and $29 plus shipping and handling to others.

Solutions Inc. can be reached at 30 Commerce St., P.O. Box 783, Williston, Vt. 05495; (802) 865-9220.

National Semiconductor introduces EtherNODE cards for Mac

Santa Clara, Calif. — National Semiconductor Corp.'s Computer Enhancement Group last week announced two new Mac Ethernet cards.

Based on technology from Dove Computer Corp. of Wilmington, N.C., the new EtherNODE cards join the company's existing line for IBM PCs and compatibles.

The EtherNODE•32 SE/30, a 32-bit card for the Mac SE/30, costs $595 and uses National's DP83932 System-Oriented Network Interface Controller device. The controller uses direct memory access to help prevent bottlenecks at the machine, the company said.

The $595 EtherNODE•16 NB works with Mac IIs and is based on the company's own Ethernet chip set. Although shipped with their own drivers, the boards are also compatible with Apple's EtherTalk drivers, the company said. Both boards connect to thick and thin Ethernet. On-board support for a 10BASE-T twisted-pair connector is slated for next year. Both cards are available 30 days from order.

National Semiconductor Corp. can be reached at 2900 Semiconductor Drive, P.O. Box 58090, Santa Clara, Calif. 95052-8090; (408) 721-5020.

DynaPerspective to support RenderMan format

Boston — Joining a growing number of 3-D graphics vendors, Dynaware Corp. announced last week that it will support Pixar's MacRenderMan in its $995 DynaPerspective 3-D visualization software.

DynaPerspective files can be saved in RenderMan Interface Bytestream (RIB) format for export to MacRenderMan, a $795 program for rendering photo-realistic 3-D images, developed by Pixar of Richmond, Calif. (see MacWEEK, Aug. 7).

Within MacRenderMan, DynaPerspective images can be enhanced with surface textures, light shadows, motion blur and other visual effects.

Dynaware joins Mac graphics developers MacroMind Inc. and Visual Information Development Inc. in supporting the RIB file format.

DynaPerspective with MacRenderMan support will be available in January. The program will require a color-capable Mac II-line machine with System 6.0.3 or higher, 32-bit QuickDraw, 4 Mbytes of RAM, a hard disk and MultiFinder.

Dynaware Corp. is located at 950 Tower Lane, Suite 1150, Foster City, Calif. 94404; (415) 349-5700; (800) 445-3962.

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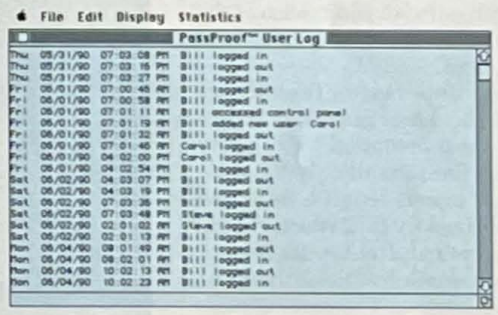

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Best of all PassProof is user friendly.

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Ask your dealer about other Kensington accessories including cable and lock systems for all Apple and Macintosh computers, including the Mac Portable and the LaserWriter® II. Or call for a free brochure at 800-535-4242. Outside the U.S., call 212-475-5200.

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Iomega puts new twist in memory line: Ricoh optical

By Henry Norr

Roy, Utah — Iomega Corp. last week added a new medium to its line of removable-media storage devices, shipping a second-generation erasable optical drive that it said delivers "up to twice the performance of conventional magneto-optical products."

Available now for $4,999, the new LaserSafe is Iomega's first drive that does not use the company-patented Bernoulli technology. The system is based on a Ricoh mechanism that reads and writes the format adopted by the International Standards Organization and used in Ricoh- and Sony-based units from other vendors.

Charlie Chang, Iomega's Macintosh product manager, said the introduction of the new drive, which also works with OS/2 and will soon be available for Windows and Novell systems, "marks the end of the one-product, one-technology era" for Iomega.

Like most other current erasable optical drives, the LaserSafe can store 594 or 652 Mbytes of data per cartridge, depending on sector size selected.

What distinguishes its product, Iomega said, is the way its driver takes advantage of the 256-Kbyte cache on the drive controller to speed write operations. Instead of making the Mac and its user wait while the drive completes the three passes needed to write data to magneto-optical media, the LaserSafe uses an asynchronous write technique that lets the computer resume operations as soon as the data is transferred to the cache. Like Sunnyvale, Calif.-based SuperMac Technology's recently announced LaserFrame, the Iomega driver also uses blind transfers to further improve performance.

Iomega will offer cartridges for the drive for $299. The company's software formats the cartridges, a task that can take up to 40 minutes, in the background.

Iomega Corp. is located at 1821 West 4000 South, Roy, Utah 84067; (800) 456-5522. □

New optical drives offer higher performance

The announcement of Iomega's new LaserSafe magneto-optical drive reflects a growing desire on the part of vendors and users for better performance than the first generation of rewriteable optical drives based on Sony and Ricoh mechanisms delivered.

Early this year, Storage Dimensions of San Jose, Calif., began shipping optical drives based on the higher-performance Tahiti mechanism developed by Maxtor Corp.'s MaxOptix subsidiary.

In April, MACsetra Technologies of Saskatoon, Saskatchewan, released its Genesis 6000i, a new version of its Sony-based unit with software and firmware enhancements that it said cut effective seek times from 95 milliseconds to 36 milliseconds. The $5,495 drive is optimized, according to MACsetra, especially for digital stereo recording with sound digitizers such as the Audiomedia board from Digidesign Inc. of Menlo Park, Calif.

In June, SuperMac Technology announced the LaserFrame, a $6,499 Sony-based drive optimized for use with large graphics files, according to the company. And last month, Irvine, Calif.-based MicroNet Technology Inc., which already had a Sony optical drive in its lineup, added a new model with a different mechanism altogether. The mechanism is a Canon unit that departs from the Sony-Ricoh format but promises much faster data transfer. — *By Henry Norr*

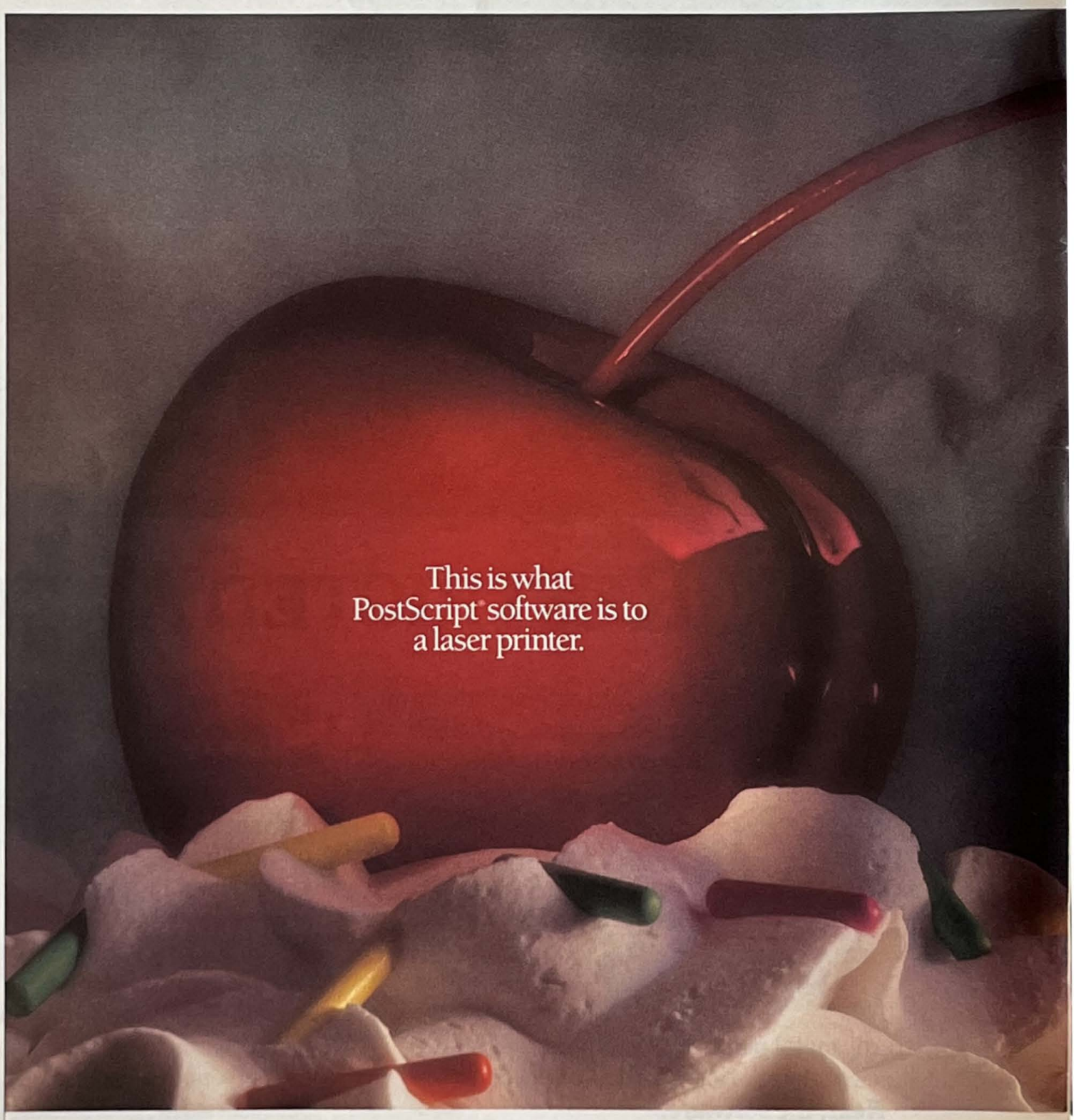
MyTimeManager upgraded

Cambridge, Mass. — MacShack Enterprises is now shipping Version 3.0 of MyTimeManager, its personal time-management software (see MacWEEK, June 19).

The new version, which remains at $79.95, adds multi-user network features, improved date entry, file import and export, multiple-day events, enhanced reminders, and a meeting time line.

Registered owners receive free upgrades; those who purchased before July 15 must pay $15 for the rewritten manual.

MacShack Enterprises is located at 19 Harrington Road, Cambridge, Mass. 02140; (617) 876-6343. □



Campagne upgrades Commtact/ELS

By John Webster

Nashua, N.H. — Campagne Associates Ltd. recently upgraded its Commtact/ELS software designed for non-profit organizations automating their mailing list, membership and fund-raising management.

Version 2.2 of the $795 program, based on Blythe Software Inc.'s Omnis 5 relational database, features several enhancements. These include extended field lengths; faster retrieval; improved sorting to handle more names; and Lookup Buttons, which allow users to display lists of available codes for data entry.

The company also added a feature called Copy Master Record to the Clipboard. The feature copies a record's mailing information, including salutation, into a word processing document complete with the current date at the top of the page. Word processors can be opened directly from Commtact/ELS.

Campagne Associates is offering a 60-day money-back guarantee. Users can purchase an annual support policy for $195.

Campagne Associates Ltd. is located at 491 Amherst St., Nashua, N.H. 03063; (603) 595-8774. □

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Shield cuts radiation from 19-inch displays

By John Webster

Santa Monica, Calif. — Amid heated controversy about possible VDT-related health effects, NoRad Corp. this week will introduce a shield that cuts radiation, glare and reflection from 19-inch displays.

The $349 SuperShield, which attaches to the monitor bezel with Velcro tabs, fits over the Sony Model 1950 CRT used in 19-inch color displays from SuperMac Technology, Radius Inc., RasterOps Corp. and Sigma Designs Inc.

The company claims the SuperShield eliminates more than 99.99 percent of the radiation generated by the monitors, including a portion of the extremely low frequency (ELF) emissions at the core of the safety debate. Some studies have suggested a possible link between prolonged exposure to VDT emissions and miscarriages, skin cancer and other ailments.

Since electromagnetic emissions increase with screen size and color capability, the company said protection is especially important for users of large-screen color monitors.

The dark-tinted screen eliminates glare and reflection with a 230-thread-per-inch mesh. Its conductive metal-coated surface drains static to a ground wire. Since static attracts dust, nullifying its charge helps keep the monitor screen clear.

NoRad Corp. is located at 1549 11th St., Santa Monica, Calif. 90401; (213) 395-0800; (800) 262-3260. □

Farallon's Liaison 3.0: More-flexible routing

By Margie Wylie

Emeryville, Calif. — Hot on the heels of acquiring most of Liaison Inc.'s people and products (see MacWEEK, June 26), Farallon Computing Inc. last week announced an update to Liaison, Infosphere's flagship product.

Version 3.0 will ship in September for $395 as Farallon's PhoneNET Liaison. Upgrades are $75.

Liaison software allows Macs to connect to LocalTalk, EtherTalk, TokenTalk, ArcTalk, BroadTalk or any other Apple-standard network without special hardware.

The upgrade will add three main features to the multiple routing capabilities of Version 2.0.6.

- AppleTalk Phase 1 and 2 protocol networks can now share one copy of Liaison.
- Communication Control Language (CCL) scripting supports modems and other devices like X.25 packet assembler/disassemblers that don't use the Hayes AT Command set.
- Up to five AppleTalk networks, including one modem connection, can use a single router.

In addition, Farallon said that next month it will ship Liaison Gateway 1.0.1, software for routing Microsoft Mail messages over remote networks. The gateway bundled with PhoneNET Liaison 3.0 will cost $495.

Farallon Computing Inc. is located at 2000 Powell St., Suite 600, Emeryville, Calif. 94608; (415) 596-9100. □

Revision...

if:X™

A word from the people who brought you MacInTax.®

It began with a great idea. Take the world's most challenging forms, organize them in a way that "people" can relate to, and the best selling forms product would appear – eliminating drudgery and bringing "joy" forever. You might say that's how MacInTax came into *being* – well almost.

You see MacInTax really started with Softview's original vision of an *intelligent forms technology* (we've shortened that to read if:X™ for obvious reasons). We learned very quickly that MacInTax provided most people with what they needed; a product that immediately simplified the way that they gathered, organized – and ultimately sent off their taxes – picture perfect and ready for their favorite *Uncle*. It no longer required an accounting degree, advanced IRS Seminar or a guy named *Bernie* with a green eyeshade to help you through *the* night – of April 14th.

No, we didn't eliminate taxes – just made the process a little more enjoyable, less time consuming.

Our if:X technology takes on other forms.

So we decided to take everything that you loved about MacInTax and apply it to some of those other tasks that you also love to hate doing – like filling out expense reports, home financing forms, or even applying for government work. Sound familiar?

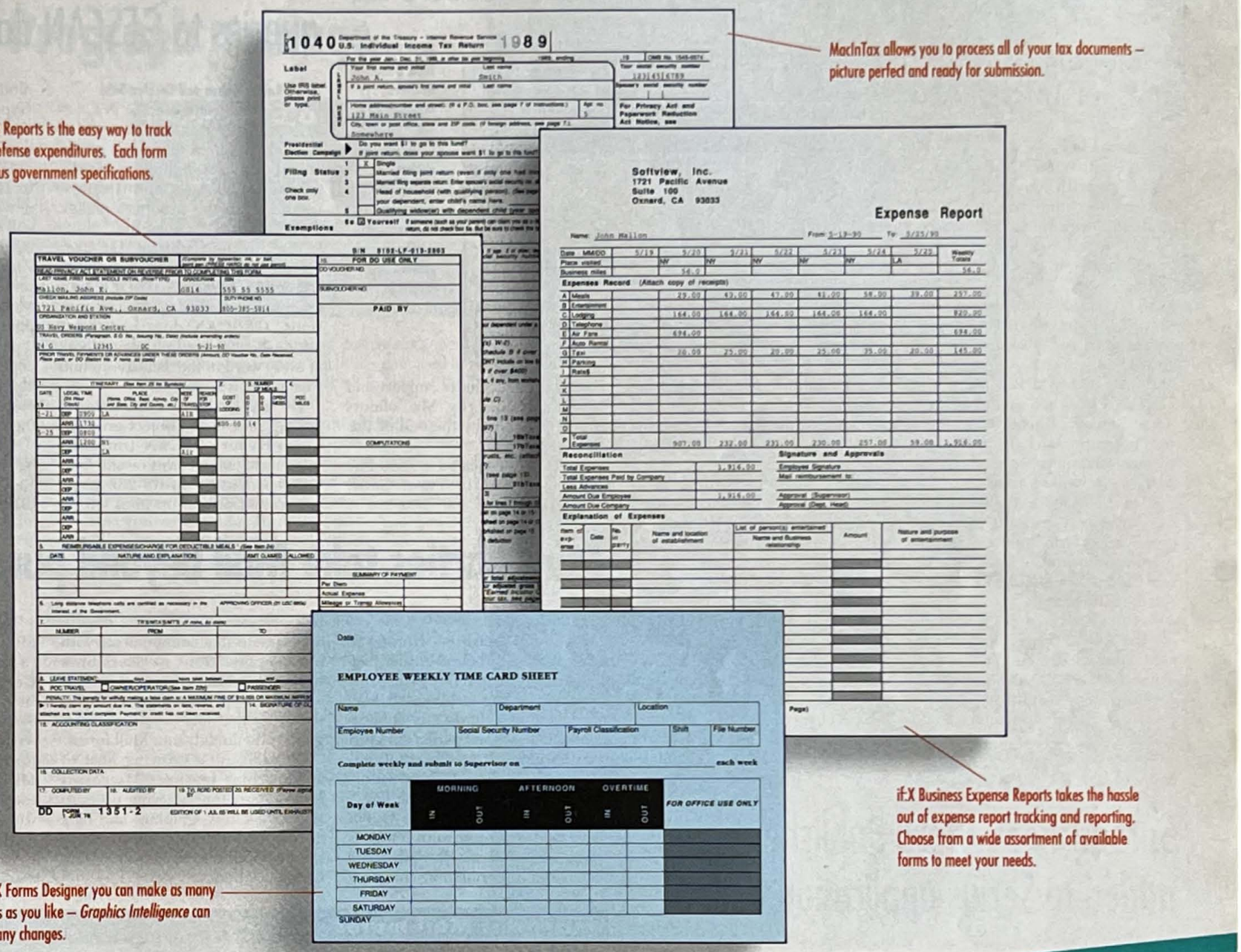
To help you with some of these other *real life forms,* we introduced if:X Business Expenses Reports, Home Loan Assistant, Payroll Tax Assistant and Personal Tax Analyst – all based on the same great, easy-to-love technology that you first *experienced* with MacInTax.

Designed for personal, business and government use, the if:X applications include easy to use forms – right on screen. Print on demand forms – ready for submission. Quick updates – and recalculations – all possible through "linked" forms and fields. It's everything that you need to simplify and automate your other tedious jobs.

Our Vision.

if:X DOD Expense Reports is the easy way to track Department of Defense expenditures. Each form adheres to rigorous government specifications.

MacInTax allows you to process all of your tax documents – picture perfect and ready for submission.



if:X Business Expense Reports takes the hassle out of expense report tracking and reporting. Choose from a wide assortment of available forms to meet your needs.

With if:X Forms Designer you can make as many revisions as you like – *Graphics Intelligence* can handle any changes.

Beyond all forms with if:X Forms Designer.

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What Forms Designer has that no other product can offer is a whole new way to define forms and tables, based on our latest technology. We call it *Graphics Intelligence*™ – and it allows you to make changes to a form without having to go back and rearrange other elements. Go ahead, change any form, chart, table, schedule as many times as you like. Forms Designer will stay ahead of you, keeping up with your *revisions*.

Unlike any other forms design tool, Forms Designer lets you get the job done right the first time – even if your boss wants to add one final creative touch. It's a product that you'll learn to love – the minute that you see what it can do for you.

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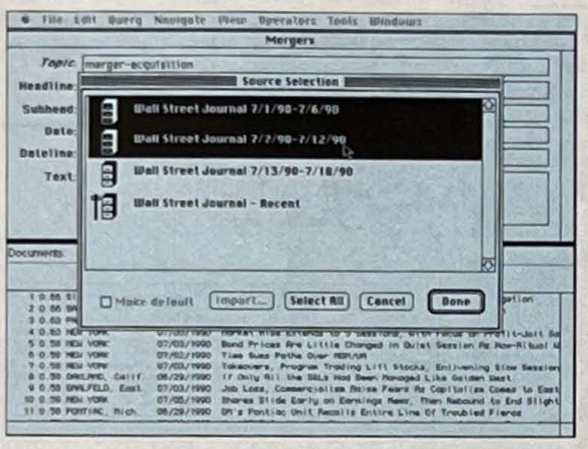
S O F T V I E W

Images, documents Topic of retrieval

Distributed DBMS runs on Macs, hosts



With Verity's Topic Document Retrieval System, users can search large databases over networks. Organized by topic, the distributed database can present query results in order of relevance.

By Carolyn Said

Mountain View, Calif. — Corporations with mountains of information to store, digest and sort can add Verity Inc.'s Topic Document Retrieval System for the Macintosh to their arsenal of data-handling tools.

Based on a distributed-processing model, Topic runs over AppleShare, NJS and 3Com networks. Individual workstations, including Macintoshes, IBM PCs, Suns and DEC VAXes, act as networked Topic Retrieval Clients, which field user requests, search the distributed database and quickly present results in relevance-ranked order.

Mac clients use a graphical interface and object-oriented query language to perform searches. Similar graphical interfaces for IBM PCs and X Window platforms will be released this year.

Verity assists new sites in creating the core of the search architecture, a knowledge base of "topics." Topic also uses a Database Builder, a suite of application utilities, to create, modify and maintain Topic databases.

Topic offers HyperLink connections to images, annotations and documents; an application programming interface; and an optional SQL-Bridge interface to structured query language relational databases, such as Oracle and Sybase.

Verity also offers Topic Real-Time, which connects to live data feeds from sources such as news wires and electronic mail. Topic Real-Time dynamically indexes and profiles incoming information and alerts the user when relevant news arrives. Verity also will be developing Topic Real-Time services for Dow Jones & Co.'s new DowVision on-line news and information service (see MacWEEK, June 5).

Topic prices range from $695 for a Retrieval Client to $15,000 to $150,000 for network configurations. Pricing includes support and training from Verity. Mac clients will be available by the end of this year, Verity said.

Verity Inc. is located at 1550 Plymouth, Mountain View, Calif. 94043-1230; (415) 960-7600. □

Mac front end speeds, simplifies queries to GESCAN database on VAX

By Raines Cohen and Carolyn Said

Research Triangle Park, N.C. — HyperGESCAN, a new connectivity stack, will help Mac users quickly and easily search huge quantities of data stored on mainframes, according to the product's maker, GESCAN International Inc.

The product adds a Mac user interface to the GESCAN full-text search system running on DEC VAX computers. Unlike many text systems, GESCAN does not index information. The search engine looks at every word in the database to find what a user is looking for.

Users enter queries and data via pop-up menus and object-oriented tools. HyperGESCAN transmits requests to and receives results from VAX hosts using an RS-232 serial connection or dial-up lines with a modem. Results are displayed in a HyperCard window. Macs also can run in VT-emulation mode to access the GESCAN VAX-based data.

GESCAN is creating a front end to Dow Jones' DowVision on-line news and information service that will search information as it comes off the wire. "If information matches your profile, it comes up on your screen within a second," said Dave Morris, GESCAN vice president for product planning and support.

HyperGESCAN costs $500 per copy; quantity discounts are available. GESCAN for host systems costs $22,000 to $60,000, depending on configuration.

GESCAN International Inc. can be reached at P.O. Box 12599, Research Triangle Park, N.C. 27709; (919) 460-3100; (800) 982-2177. □

Third parties take Mail beyond pure messaging

By Carolyn Said

Redmond, Wash. — Hoping to prove that "the whole is greater than the sum of its parts," Microsoft Corp. is pointing to Microsoft Mail combined with third-party applications that go beyond pure messaging.

Status Mac from Pharos Technologies Inc., Syzygy from Information Research Corp. and TFLX from Magnum Software Corp. offer built-in workgroup features that run over Microsoft Mail. Mail's application programming interface lets software developers create applications that communicate with other applications or users on a network via Mail, Microsoft said. It also offers an "intelligent" forms capability that lets developers program code directly into Mail forms.

In addition, a growing host of applications features Microsoft Mail integration, allowing users to share files, text, graphics and data across the network by directly sending Mail messages from within the applications.

Informed Designer, Informed Mini-Manager and Informed Autoform from Shana Corp.; MacGraphX from Bravo Technologies Inc.; StuffIt Deluxe from Aladdin Systems Inc.; and Voice Link from Articulate Systems Inc. recently joined Aldus PageMaker and Microsoft Excel and Word as applications that offer Mail commands within their menus.

Microsoft Corp. is located at 1 Microsoft Way, Redmond, Wash. 98052-6399; (206) 882-8080. □

Microsoft Mail mates

PRODUCT	PRICE	AVAILABILITY	COMPANY	WHAT IT DOES
Applications that work with Microsoft Mail to provide workgroup solutions				
Status Mac	$799.50	Now	Pharos Technologies Inc. Cincinnati, Ohio	Electronic network profiler: uses Mail to query users and automatically mail information back to its database or network manager for analysis.
Syzygy	Personal edition, $395 Server edition, $695 Workstation edition, $150	Sept.	Information Research Corp. Charlottesville, Va.	Project tracking program: uses Mail to automatically notify users about changes to projects and tasks.
TFLX	$495 to $2,995	Now	Magnum Software Corp. Chatsworth, Calif.	Call-routing and messaging system: reads Mail messages to users over phone.
Applications that offer Microsoft Mail integration				
PageMaker	$795	Now	Aldus Corp. Seattle, Wash.	Desktop publishing software: lets users send, open and place Mail files.
Informed Designer Informed Mini-Manager Informed Autoform	$295 $99 $149	Fall Fall	Shana Corp. Edmonton, Alberta	Forms-design products: let users exchange forms layouts or data via Mail.
MacGraphX	$199 With MacCalc, $239	Sept.	Bravo Technologies Inc. Berkeley, Calif.	Charting and graphics software: lets Mail users send and receive data and charts.
Microsoft Excel	$395	Now	Microsoft Corp. Redmond, Wash.	Spreadsheet program: lets Mail users exchange spreadsheets or data.
Microsoft Word	$395	Now	Microsoft Corp. Redmond, Wash.	Word processing program: lets Mail users exchange documents.
StuffIt Deluxe	$99.95	Now	Aladdin Systems Inc. Aptos, Calif.	File-compression and archiving program: automatically compresses Mail enclosures.
Voice Link	$269	Aug.	Articulate Systems Campbell, Calif.	High-speed digitizer: lets Mail users create and edit voice messages.

Spreadsheet, Word Publisher objects added to Serius application builder

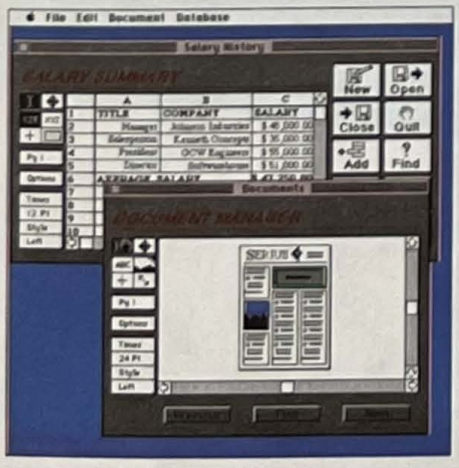
By John Webster

Salt Lake City — Serius Corp. is making it easier for users to write different kinds of applications with several new objects added to Version 2.0 of its Serius icon-based development system (see MacWEEK, April 24).

Objects, or precompiled code, perform core functions within applications. For example, users can construct windows from a Serius Window object, the company said.

With Serius, objects also can be used as window items with buttons and menus, which in turn use functions such as "open window" or "delete database record" to help users create applications.

New objects slated for Serius include a Spreadsheet and a Word Publisher. Both objects will be available by mid-September for $75.



Serius 2.0 will include Spreadsheet and Word Publisher objects, precompiled code that gives users core functions for building spreadsheets or word processing programs.

The Spreadsheet object, which can work within Window objects, offers spreadsheet fields, a macro language and background cell updates. The Word Publisher also works as a field in Serius Window objects, providing text-editing and formatting options.

Prices for the entire software package will remain at $295 for Serius Programmer and $495 for Serius Developer.

Serius Corp. is located at 1981 East 4800 South, Salt Lake City, Utah 84117; (801) 272-7788. □

The Gunkara Sun Systems adds compiler to Prograph package

By Henry Norr

Halifax, Nova Scotia — The Gunakara Sun Systems (TGS), developer of the acclaimed Prograph object-oriented graphical programming language and development environment, last week released a new version with a compiler capable of creating full-fledged, double-clickable commercial or in-house applications.

Prograph 2.0, priced at $395, also includes an enhanced version of the editor and interpreter first released last fall as Prograph 1.2. The package, according to TGS, now provides full support for all Mac features detailed in volumes 1-5 of Apple's Inside Macintosh handbook, including support for serial ports, Sound Manager and Color QuickDraw.

Like the original release, Prograph 2.0 provides a point-and-click development environment. A series of high-level editors (collectively called the Application Builder), which TGS compared to NeXT Inc.'s NextStep, helps the programmer create ready-to-run menus, windows, dialogs and other interface components. The application itself is created by constructing a data flow diagram that maps the operations to be performed on data.

Stand-alone programs created using Version 2.0's compiler can include Prograph files as well as code written in Apple's Macintosh Programmer's Workshop C or Symantec Corp.'s THINK C. A Project Manager links Prograph object code, libraries, resource files, and compiled THINK C and MPW C files.

Beta testers said Prograph 2.0 will meet a wide range of programming needs, from special-purpose in-house programs to commercial applications that support such features as Interapplication Communications.

An MIS manager at a Fortune 500 company, who asked not to be named, said he used Prograph to develop an easy point-and-click Finder substitute for users who "find the Mac interface a little overwhelming."

"I looked at HyperCard and a whole lot of other ways to do it," he said. "Some had a low learning curve, but the performance was slow. Prograph is extremely easy to learn but also gives me good performance."

David Feldt, senior staff scientist at Invention Software Corp. of Ann Arbor, Mich., said his software consulting and training company is incorporating Prograph — alongside THINK C and Apple's MacApp — into the object-oriented programming (OOP) courses it conducts for Apple and other clients. "The nice thing about it," he said, "is that it shows that you can use OOP for more than just building an interface."

While Prograph offers most of the interface-building features of the Apple and THINK tools, Feldt said, it also lets developers "open up class libraries that do the things you need in your programs, which, after all, is one of the hopes and dreams of OOP."

Prograph 2.0

Specs

- Compiler creates stand-alone applications
- THINK C and MPW C code can be included
- Full support for features in "Inside Macintosh," volumes 1-5

For advanced programming techniques, such as IAC and parallel processing, Feldt said that data flow diagramming offers inherent advantages compared with the linear, procedural approach used even in most OOP environments. In addition, he pointed to Prograph's Synchro tool, which solves some critical program-coordination problems by letting developers enforce a particular execution order within the data flow.

"The only reason we haven't been doing more with it is the lack of a compiler," Feldt said. "Now that they've taken care of that, and done it in a way that will be easy for anyone who knows THINK C to adjust to, we think it's something professional programmers should really consider using."

Prograph 2.0 requires 2 Mbytes of RAM. Prograph 1.2, the editor-interpreter version of the program, remains available at $195.

No additional license fees are required for applications developed with Prograph.

TGS is located at 1127 Barrington St., Suite 19, Halifax, Nova Scotia, Canada B3H 2P8; (902) 429-5642; (800) 565-1978. □

EDI colorizes MacToken

Cupertino, Calif. — EDI Communications Corp. recently announced an upgrade to MacToken, its token-ring network diagnostic application. The new version can display network events in color; capture, display and print a network-event log; and graph performance on IEEE 802.5 token-ring networks using Apple's TokenTalk NuBus card.

MacToken remains priced at $1,350.

EDI Communications Corp. is located at 20440 Town Center Lane, Suite 4E, Cupertino, Calif. 95014; (408) 996-1343. □

Inman Software acquires rights to Business Sense

Evanston, Wyo. — Frustrated users of Business Sense — which has been marketed by Digital Etc., Monogram Software Inc. and again by Digital Etc. — now have a new company to turn to for support.

Inman Software, a newly formed partnership here, has assumed the marketing rights to Version 1.3 of the small-business integrated accounting program and has lowered the price from $495 to $195.

Users who bought extended support from either Monogram or Digital Etc. and have time remaining on their contracts will receive free support. Inman also is selling a year's support for $100, or $50 for three months.

Business Sense, which is designed for companies with five to 50 employees, includes modules for general ledger, accounts receivable, accounts payable, invoicing, payroll, budgeting and reporting.

Inman Software was formed by Roger Pryor, co-developer of the program; Mike Ehman, founder and president of disk drive vendor Ehman Inc.; and Ralph Fascitelli, owner of Ehman.

Inman Software is located at 97 S. Red Willow Road, Evanston, Wyo. 82930; (307) 789-7257. □

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S O F T V I E W

New Media STEVE ROSENTHAL

Dancing to the tune of those old standards

I'm not sure who originated the joke that standards are nice because there are so many to choose from, but it's certainly applicable to multimedia. Not only are we faced with an embarrassment of potential standards, the market still hasn't decided whether standards should be set by the platform vendors, industry groups or market leaders.

And although Apple, Microsoft and a few other important players have promised to develop file formats and application programming interfaces for multimedia, developers and users can't afford to wait.

Days of confusion. In what I can only ascribe to the power of truth breaking through marketing prose, a recent Apple statement proudly announced that "Apple is behind media integration in a big way."

What Apple ostensibly is telling us is that those hard-working folks in Cupertino are devoting a whole bunch of resources to the standards issue (which is true).

The company has promised a Media Control Architecture as well as an extension to the operating system for time-based media, to be called QuickTime. What's more, Apple plans to improve speech processing and video compression and decompression on existing Mac hardware sometime next year.

All of this is important stuff. But what I also read between the lines of Apple's statement is that it doesn't expect to have specifications for QuickTime until at least the end of the year. (It's still soliciting comments from developers, which is either good or bad news depending on how you look at it.) Specifications for the other enhancements don't even have a public target date.

But even though standards remain to be worked out, Apple is strongly encouraging developers to ship multimedia products and supplements of ever-increasing sophistication and complexity.

As a result, we're seeing products now that may or may not be compatible with standards Apple says it soon will begin to deliver.

Who's going along? Another area where products are outrunning standards right this very moment is video output from the Mac.

Last week's Macworld Expo in Boston boasted more than a dozen Mac-to-video interfaces but no standard for software, machine control by the Mac nor even for user interfaces.

You could read some support for a machine-centered approach to deciding standards in the about-face done by Indianapolis-based Truevision. Although the leader in high-end videographic cards previously built its Mac cards to work with the same special data-file formats it used on the IBM PC, it has now taken the other approach.

On both the Mac and the PC, Truevision's new video cards will mimic the current standard video configuration of their host machine. That means a post-switch NuVista card for the Mac will work with all standard Mac programs without requiring special output routines, but it may not be capable of displaying a file you've put together on the PC.

On the other hand, Apple and just about everyone else making video-output hardware is scrambling to provide "NTSC" (National Television System Committee) capability (really, sufficiently NTSC-like to record and watch on standard consumer video equipment) because it still doesn't pay to produce a Mac-standard video recorder.

Who's ahead? The cynical view would be that a period of confusion such as this is good for consultants, conference sponsors and columnists, while users and developers suffer.

But in truth, we still need a period of exploration to find out what works and what doesn't. Perhaps the reality is that some unevenness is inevitable in this field, since neither Apple, Microsoft nor anybody else knew enough a few years back to begin working on standards.

We do need standards, particularly for low-level hardware connections and for file-exchange formats. But for now, it looks like we'll have to start dancing and figure out the right tune later. □

Send tips and comments to Steve Rosenthal, c/o MacWEEK, 301 Howard St., 15th Floor, San Francisco, Calif. 94105; AppleLink: Steve.R; MCI: 114-8611.

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ARCnet cards boost Mac networking

By Margie Wylie

Boston — ARCnet hasn't made a big splash in Mac networking, but two big ARCnet vendors have introduced network interface cards they hope will popularize the protocol with Mac users.

▶ Standard Microsystems Corp. unveiled its line of Mac ARCnet cards at last week's Macworld Expo. The cards were created to connect Macs with the installed base of 3 million IBM PC ARCnet cards, but Standard said it hopes that Mac-only networks eventually will adopt the card. ARCnet runs about 2.5 times faster than LocalTalk but a bit slower than Ethernet.

Four Standard cards, all priced at $495, are due in September: The SE100 and SE250 for Mac SEs work with coaxial cabling and unshielded twisted pair, respectively; the twisted-pair NB250 and coax NB210 run on Mac IIs.

The cards work with SMC's Intelligent Hubs, which are controlled from IBM PCs. Mac management software also is coming, the company said, but no date has been set.

▶ Thomas-Conrad Corp. shipped its Mac ARCnet line for twisted-pair, coax and fiber-optic connections earlier this year. The company's ARC-Card line includes cards for the Mac SE, SE/30 and II families at prices from $445 to $995, depending on Mac model and media.

The twisted-pair and coax cards work with Thomas-Conrad's Smart Hubs, which can be managed from IBM PC ARCnet workstations on the network. The company has no plans for Mac-based management software.

Standard Microsystems Corp. is located at 35 Marcus Blvd., Hauppauge, N.Y. 11788; (516) 273-3100.

Thomas-Conrad Corp. is located at 1908-R Kramer Lane, Austin, Texas 78758; (512) 836-1935. □

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How to sign up for Zmac

You'll need a modem and telecommunications software. Set your format for 8 bits, one stop and no parity.

Find your local access number:

Dial 1-800-FIND CIS (346-3247). When connected, press RETURN.

At Host Name prompt, type PHONES.

Follow instructions to locate access numbers in your area. Hang up.

Signing up for an account

Dial up using your local access number. When connected press RETURN.

You'll see the following prompts on-screen. Your responses are printed in bold.

Host Name: **CIS**

User ID: **177000,5200**

Password: **Z*MAC**

Agreement Number: **Z12D0890**

You will then be prompted for additional information including a credit card number for billing purposes. If you cannot bill to a credit card, call the CompuServe Customer Support line listed below.

Your new Zmac ID and password will be displayed on-line. Call again and explore Zmac. A new password will arrive in the mail within 10 days.

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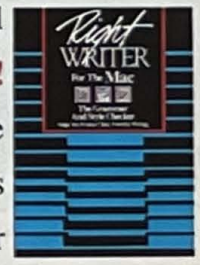

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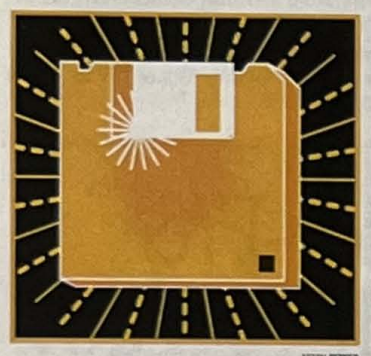
Letters

Microsoft golden masters: Good to the very last bit



KEVIN BERGER

As the Microsoft Excel product manager responsible for Microsoft Excel training materials, I was surprised to read the letter from Gail Lawley (MacWEEK, June 5). Lawley described her experience of discovering a virus on one of the 10 Microsoft Excel training disks she was using for an Excel training class. My surprise at Lawley's letter stems from the fact that state-of-the-art virus detection software and careful employee practices are in place here at Microsoft.

I have spent the past month carefully investigating this issue. I have found no indication that the virus came from Microsoft software. The "golden masters" from which Microsoft duplicates software were thoroughly examined and no evidence of a virus was found. In fact, thorough virus-screening procedures are an important and regular part of our software duplication procedures.

Renee Watremez, product manager
Microsoft Corp.
Redmond, Wash.

A Crate by any other name would still . . .

Last week, a consumer, Jon DeSoi, complained about his experiences with Crate Technology Inc. and Data Storage Development Inc. This week, Data Storage Development President Chris Lemoine, formerly president of Crate Technology, replies:

Data Storage Development is a new company. In starting operations, one of the assets it purchased was the trade name of Crate Technology, along with its telephone number and the right to manufacture and sell Crate Technology products and to service, at its discretion, Crate Technology products.

Jon DeSoi is one of the many Crate customers who purchased a Crate Technology drive. DeSoi's drive was in the Crate Technology facilities for repair when Crate Technology went bankrupt.

Crate Technology could have better served its former customers had it notified customers of the U.S. Bankruptcy Court's action and advised customers of the procedure to follow to retrieve their property. Unfortunately, Crate Technology failed to do this.

DeSoi reached Data Storage Development through Crate Technology's old phone number when he called to learn the status of the drive he had shipped to Crate Technology for repair. At that time, he was informed of the entire bankruptcy scenario.

DeSoi's drive, along with other customer drives and other Crate Technology assets, were liquidated at auction by the U.S. Bankruptcy Court trustee.

Failures of the U.S. Bankruptcy Court, Crate Technology and former Crate Technology customers do not obligate Data Storage Development to give every injured Crate Technology customer a replacement drive. In fact, Data Storage Development has no legal obligation whatsoever in this regard. However, because of the special nature of this situation and the hardship placed on DeSoi, I personally replaced DeSoi's lost 60-Mbyte drive with a 160-Mbyte drive. I hope that this action is properly understood — as a gesture of good will and an honest effort to assist troubled former Crate Technology customers.

In the future, Data Storage Development will continue to manufacture, sell and service the former Crate product line. Its goal is to continue the tradition of providing reliable, quality Crate products to consumers at reasonable prices. MacWEEK's active part in the investigation and enlightenment of DeSoi's situation and the Crate Technology bankruptcy has been very helpful for all parties and is greatly appreciated by Data Storage Development.

Chris Lemoine, president
Data Storage Development Inc.
Sun Valley, Calif.

There may or may not be a Mac version, but . . .

I wish to address a factual error in the article "Claris integrated program in the works" that appeared in your July 31 issue. While I am not at liberty to discuss the existence or non-existence of a Macintosh version of AppleWorks GS, as one of the original StyleWare authors of AppleWorks GS and an engineer on all of the releases, I would like to point out that Bob Hearn and Scott Holdaway were not the sole authors of that program, and in fact, had nothing to do with Version 1.1. They had already left Claris when work began on that revision.

Scott Lindsey, software engineer
Claris Corp.
Santa Clara, Calif.

Mac vs. Windows: Stuck in the muddle, again

I would like to share some thoughts on the Mac-Windows dichotomy from a developer's perspective.

The Mac press has been in a dither recently about the supposed migration of software developers away from the Mac to the bountiful IBM PC-based markets of Windows 3.0. On the surface, Datacap Inc. looks like a defector. Our upcoming Windows product in all likelihood will be our flagship product. But there is more here than meets the eye.

In the course of strategic contacts with PC software vendors, I've learned that a number of them are actively porting their products to the Mac. Why? Because they've converted to the graphical user interface and no longer fear the quirky Mac environment. Lotus Development Corp. and Ashton-Tate Corp. still are suffering from the effects of their initial forays into the Mac market with products that showed little understanding of the fundamentals of the Mac interface. Perhaps many other developers were scared off for a time by demands for consistency and elegance from Mac users. Now these same developers are touting the consistency and elegance of their Windows products, and they are straining to find programmers to get Mac versions out the door.

For Mac developers, Windows 3.0 is the vehicle that will allow us to keep the Mac version of our products on the market. The entire market has grown, for both the Mac and Windows developers who are GUI-aware. Anyone stuck in the muddle

KEVIN BERGER

of "Who's going to win the GUI wars?" does not understand the dynamic facing developers today.

Scott Blau, president
Datacap Inc.
Evanston, Ill.

Who, indeed, is stuck in the muddle? Surely you aren't implying that the Windows environment is merely a justification for a GUI interface in general and the Mac specifically. — Ed.

Send letters to MacWEEK, 301 Howard St., 15th Floor, San Francisco, Calif. 94105. MCI: 323-1203; fax: (415) 243-3650. Include your name, address and phone number. We reserve the right to edit letters for clarity and length.

Editorial

The pulse of the Mac market

Beyond the cheerleading, hype and salesmanship, the annual gathering in Boston for Macworld Expo provides a way to measure the Mac market.

The size of the expo crowd — more than 400 vendors and 50,000 attendees — certainly implies an enthusiastic endorsement of Apple's machine.

And based on the products on the show floor and in private suites, the vital signs are strong: The Mac market is healthy. Apple and third-party developers retain their innovative and competitive edge. For corporate buyers, this translates into more power and functionality for less money as well as new capabilities previously unavailable on the Mac.

Among the emerging trends that surfaced at the expo were:

- Cheaper, better eight- and 24-bit color boards and lower-cost graphics acceleration.
- Low-cost NuBus cards that send Mac graphics to videotape and real-time video-capture and desktop video-production systems.
- Image and video compression and decompression boards that promise to seamlessly put full-motion video and massive still images on the desktop.
- New PostScript laser printers that reduce the cost of 300-dpi output to less than $2,500.
- Optical character recognition products, such as Caere's Typist, that painlessly scan hard copy into the computer.
- Faster and cheaper hard disks, new fault-tolerant storage systems, and backup software that works across networks.
- Three-dimensional drawing and visualization tools, such as Pixar's Showplace, Paracomp's Swivel 3D Professional and Virtus' WalkThrough.
- Connectivity packages to stimulate collaborative computing, including Group Technologies' new Aspects 1.0 and upgrades to Farallon's Timbuktu and Timbuktu/Remote.
- Significant upgrades to existing standards, such as Adobe Illustrator 3.0, Adobe Type Manager and Word Perfect 2.0.
- New programs such as Muse, Occam Research's natural-language data-analysis tool, that offer new ways to work with and view data.
- A steady flow of utilities offering new ways to customize the Mac and making it easier to keep track of information on disk.
- More components that will improve the Mac as a database machine, such as Oracle's industrial-strength database server and ACIUS' compiler for 4th Dimension. □

So long, Charlie

One of the Mac's pioneers has left the Macintosh community. Six months after his company was acquired by Aldus Corp., Silicon Beach Software founder Charlie Jackson has stepped down as general manager of the division, to sponsor amateur athletics.

Jackson started his company on a shoestring with best-selling games like Airborne and Dark Castle. He and his team gradually added productivity tools, such as SuperPaint, Digital Darkroom and SuperCard, that went beyond what was available before.

Silicon Beach became known as the quintessential Mac software company. Even as the company grew from a shaky start-up to a gold mine for which Aldus paid more than $20 million, its products and people reflected the fun and innovative spirit of the Mac.

Throughout that evolution, Jackson has remained honest, accessible and unpretentious, always willing to listen.

The Mac community has lost one of its most enthusiastic and appealing players. So long, Charlie. All the best. □

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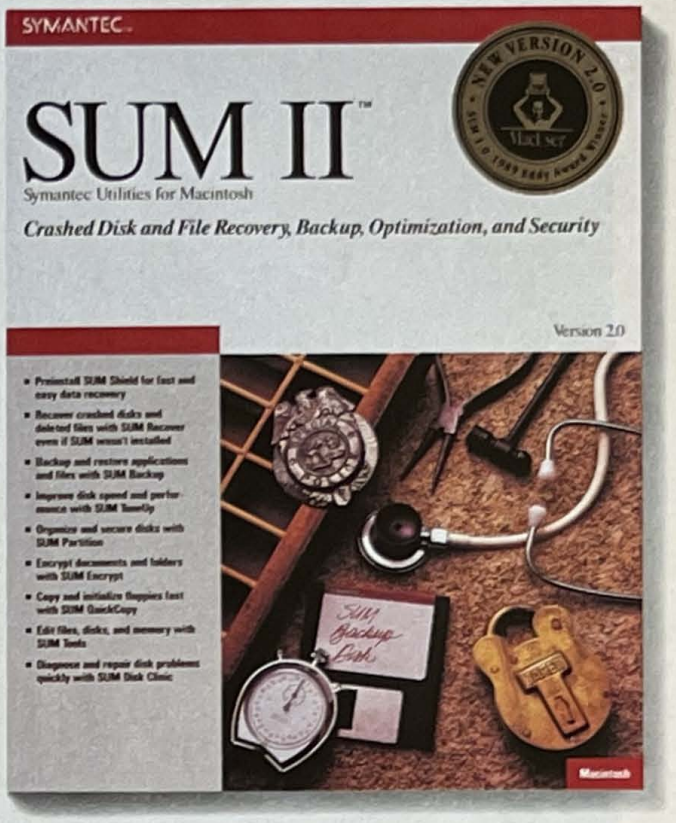
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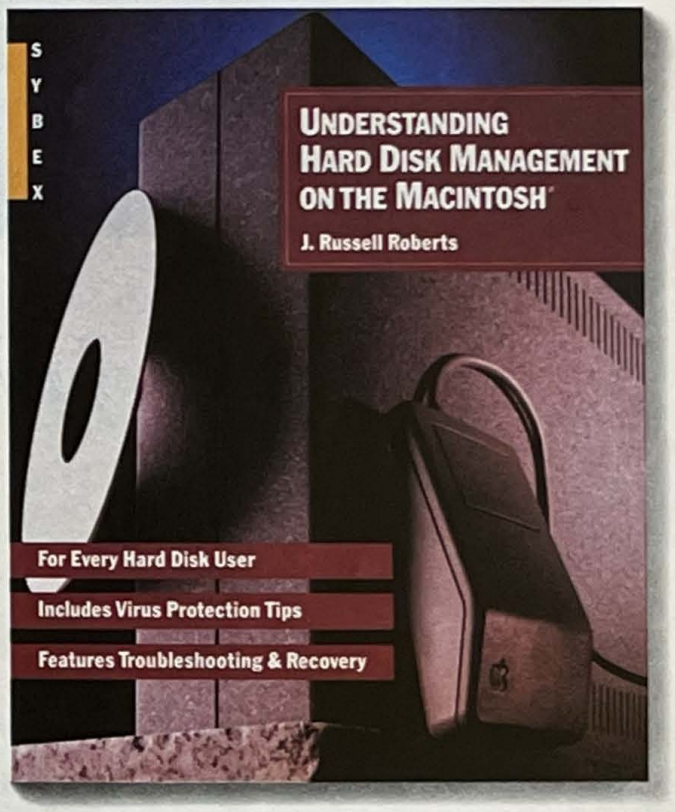
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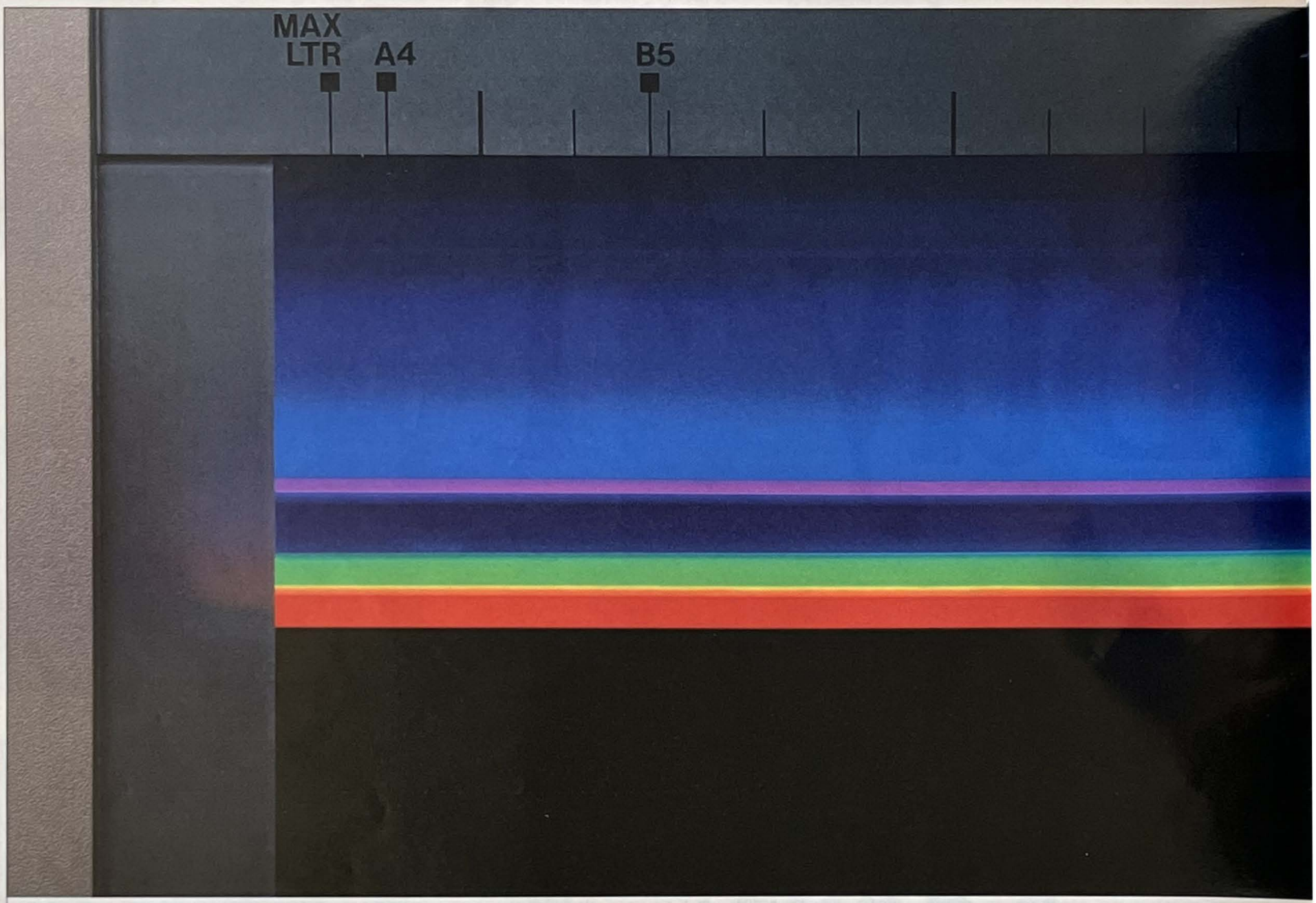

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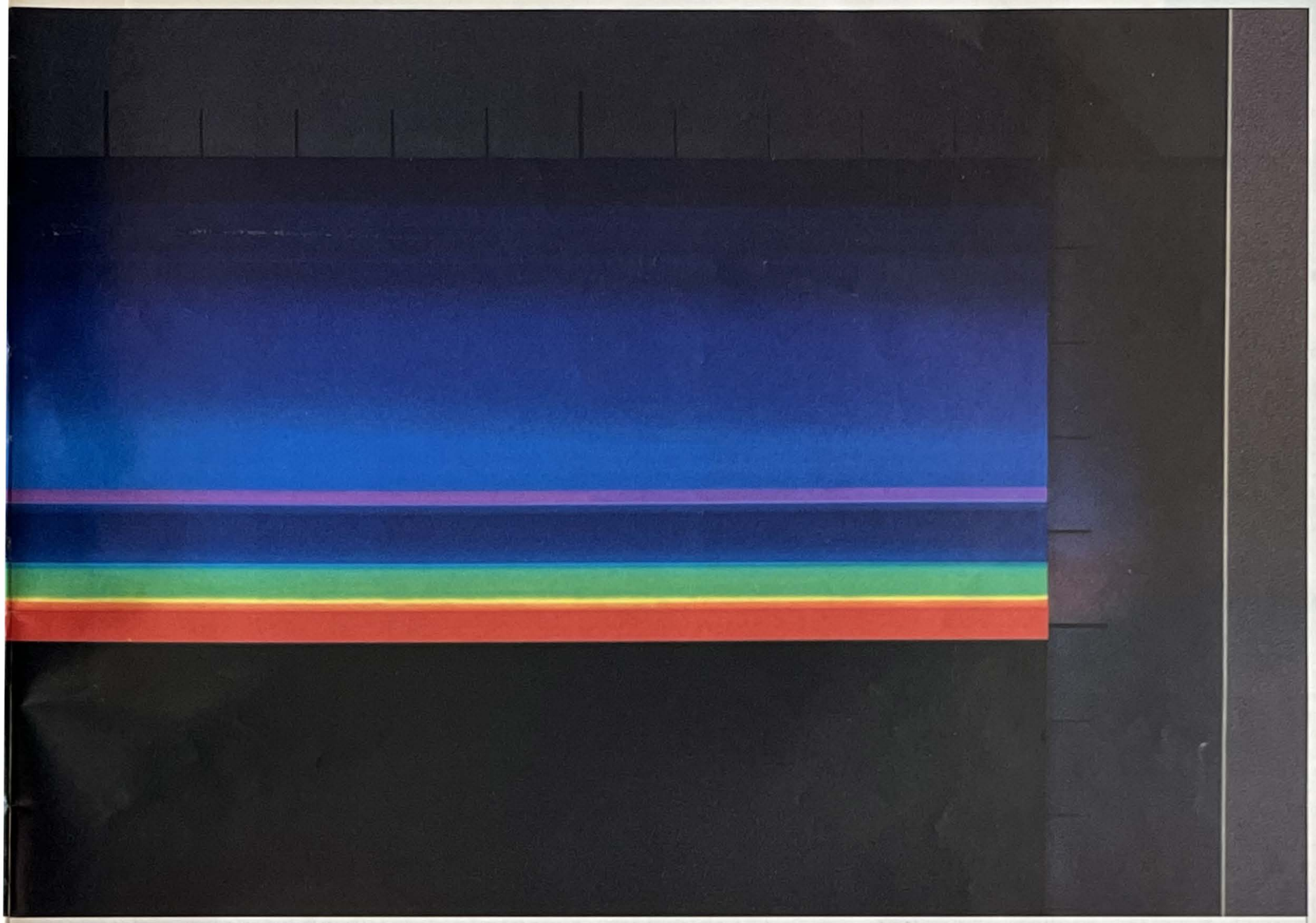

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Mac project management gives defense contractor an edge

Recent overhaul doubles business

By Amy Bermar

Four years ago, business could have been better at Hamill Manufacturing Co. Many of its nuclear parts projects for the U.S. Navy were behind schedule, and about half of its budgets were overspent by as much as 100 percent. Not surprisingly, its chance of winning new jobs was just one in seven.

Then the company made the Mac an integral part of a 30-month comprehensive business makeover. The effect on product design, manufacture and project administration has been striking.

"The way we conduct business has totally changed because of the Mac and the applications written for it," said Jeff Kelly, executive vice president of the Trafford, Pa.-based company, which completed the overhaul last summer.

"Business has doubled," he said, "although we have the same number of people in administration as we had before. What we've added is manufacturing staff, which is directly billable to the customer."

Sixty contracts for a vast range of nuclear components are now in progress, and 80 percent of the jobs are expected to come in on time and under budget. More important, the company is winning 30 percent to 40 percent of the new jobs it seeks.

That makes the 107-person company an exception in its industry, where even the market leaders are grappling with deep cuts in defense spending.

Keeping track of the situation. With fewer jobs on which to bid, it's critical that each contract pays its way. In the past, a lack of budgetary controls meant that some projects made money, but many others didn't, and Hamill's executives wouldn't know which was which until late in a typical two- to three-year development process.

"With the product line as complex as it is, and all of the required paperwork, it's easy to lose money," Kelly said. "One of the reasons that Hamill has survived is because we've become adept at finding what our costs are. Now, when we go into bid, we know our costs, and we won't go below them."

At the same time, customers such as Westinghouse Corp. and General Electric Co. are demanding an exhaustive level of detail about virtually every aspect of the parts being produced. These customers, which hire subcontractors like Hamill to produce specific parts for their own contracts with the Navy, require 20- to 30-page monthly updates about test results, schedule status and some 700 to 800 separate components.

Tracking this complexity was almost impossible without computers. Now more than 60 Mac users, including welders and the purchasing agents who specify the materials required from scores of suppliers for each contract, document their work electronically.

"Everybody who sits at a desk has a Mac," said Kelly, who spends about $40,000 annually buying additional hardware and software for new employees, as well as hard drives, memory and accelerator boards for existing equipment.

"The Macs are also in the welding shop, where the documentation is extremely complicated," he said. "And they're in manufacturing, where you wouldn't necessarily expect to see them."

Tie that binds. Today, Hamill's engineers do 3-D modeling and drafting with MacBravo from Schlumberger Technologies of Ann Arbor, Mich. Computer-aided manufacturing applications from auraCAD/CAM Inc. of El Segundo, Calif., and Bridgeport Machines Inc. of Bridgeport, Conn., are used to program the company's eight computer numerically controlled tools, primarily lathes and milling machines.

Tying everything together among three buildings are two LocalTalk networks with two 60-Mbyte Mac Plus servers linked with a Liaison bridge from Portland, Ore.-based Infosphere Inc.

LocalTalk's 230-Kbps throughput isn't an obstacle, even when sending large CAD files, Kelly said. "It might take a minute, but that's not long."

Because the pertinent information is now centralized, Hamill's customers report a new confidence in its accuracy. With so many parts and projects in the works, it's essential that nothing slips through the cracks.

Inspiring confidence. Database applications such as Panorama from ProVUE Development Corp. of Huntington Beach, Calif.; FileMaker II from Claris Corp. of Santa Clara, Calif.; and Double Helix from Odesta Corp. of Northbrook, Ill., are used for local as well as server-resident databases.

Confidential information belonging to customers or the Navy resides on encrypted hard disks; consequently, fewer employees are required to have security clearance. Each month the relevant databases are culled to create the project updates.

"The information presents a clear picture to us," said a Westinghouse project supervisor, whose company policy forbids him from being named. "The real key is that it provides clear information throughout Hamill's plant and an increased awareness of production quality."

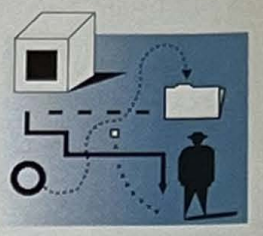
While Kelly maintains that Hamill always has paid attention to the quality of its finished goods, the Westinghouse project manager said recent improvements, particularly in project management, have given Hamill a long-sought edge.

The company has "gone from a minimal product-control standard to a very high one," said the manager, adding that the move has resulted in substantial new assignments.

"[Hamill] has received big orders it probably wouldn't have gotten before." □

SCOTT GOLDSMITH

Jeff Kelly, executive vice president of Hamill, said that the Mac has had a remarkable effect on Hamill in its bottom line, evident in product design, manufacturing and administration.



One-minute
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Some new ways to use CAD

Columbia, Md. — When John Pacylowski thinks of CAD, he thinks about more than just drafting — and he's not alone. Many others are finding new ways to push the envelope of CAD beyond the expected.

Pacylowski, who uses MiniCad+ from Graphsoft Inc. of Ellicott City, Md., in his deck-design business, said that until he began using the program's MiniPascal macro programming feature, "minor changes could be major disasters."

A carpenter rather than a trained programmer, Pacylowski used MiniPascal to write a macro that lets him put the measurements of a proposed deck into a spreadsheet and get a computer-generated plan from his Mac. "The macro is so simple that the receptionist can open it up and prepare a drawing for a client if I'm out of town," Pacylowski said. "I just gave the macro the basic information on dimensions and tolerances I've learned over the years."

He also used MiniPascal to create a bill of materials macro that changes as the plan itself is changed.

"Before we moved into our new warehouse I put the whole warehouse in the screen," Pacylowski said. "I even drew in the forklift, calculated the swing of the forklift, and then figured out how the shelves should be set up so it can move around in there."

Simulating simulations. At New York-based Kiss Cathcart Anders Architects PC, principal Greg Kiss and his staff have pressed MiniCad+ into service to design and optimize a production line for the Chronar Photovoltaic Co. factory in Fairfield, Calif.

The plant began life as a series of rough equipment sketches. "It wasn't quite product simulation," Kiss said, "but we made 3-D models of machines in MiniCad and used them to lay out the pieces of equipment in relation to one another. Then we designed the building around it.

"There are four machines that take the shape of big chambers, and they have doors that have to swing open," he said. "Using the Rotation command in MiniCad, we were able to pretty much illustrate all the possible combinations of moving equipment past these doors. We did use it to establish several crucial clearances."

Kiss said that despite his lack of programming experience, he was able to create useful macros.

Facilities management. Phil Allsop, principal of Princeton, N.J.-based RDSI Inc., is using MiniCad+ as the backbone of an innovative facilities management system at Mount Sinai Medical Center in Cleveland.

Using RDSI's own information search technologies to draw on hospital records in a mainframe database, his system displays space, resource and equipment usage. "It's more than a CAD application," he said. "CAD technology merely provides us with a way to display the intensity with which spaces or facilities are being used."

Allsop's system generates "heat maps," superimposed on drawings created in MiniCad via macros written in MiniPascal, which show intensity levels in gradations of darkness. "We can identify on a floor-by-floor level which parts of the hospital are used by cardiology patients, for example," he said. "The administrator, who is faced with a decision on spending more money, can see whether a department is in one of these 'hot' areas. This is aimed at the top level of hospital management, because that's where the multibillion dollar decisions are made."

Allsop said he expects to see similar features in other packages. With those features, CAD users are sure to perform even more unexpected tasks. — *By Mitzi Waltz*

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Tech Files

The shape of in-house development

With its third birthday behind it and Version 2.0 completed, HyperCard seems better-suited than ever for solving many of the problems that come up in in-house development.

Almost from the beginning, HyperCard has been an excellent choice for one-of-a-kind, quick development. And while simple applications can be built easily with HyperCard, its nearly unlimited extensibility via HyperTalk and external commands (XCMDs) allows developers to create sophisticated applications as well. If those applications have been well-designed, they can be used by any Macintosh user regardless of computer savvy.

With Version 2.0, HyperCard loses some of its un-Maclike rough edges and becomes easier to use to author new stacks. HyperCard should be an important part of the grab bag of tools for in-house development.

BY JOEL WEST

That's a surprisingly important role when you consider that three years ago no one fully comprehended what Bill Atkinson's HyperCard was all about. Some people referred to it as a database, while others emphasized its hypermedia possibilities.

I prefer to think of HyperCard as a programming environment based around a card metaphor, with built-in database, hypermedia and bit-mapped graphics capabilities. And that means that you must carefully consider how HyperCard applies to the task at hand.

For example, HyperCard can be a real pain to use for many database purposes. A simple flat database is a much better platform for setting up routine mailing lists, standardized data entries and reports.

But when you want more flexibility or customization, HyperCard shines. It can, for instance, automatically complete fields based on a table look-up or export data in an arbitrary format.

The new HyperCard allows this flexibility to be expressed in a fashion that is more Maclike.

You're finally freed from the tyranny of one 342-by-512-pixel card; you can design stacks around any fixed-size format that you desire. Version 2.0 allows you to resize windows and scroll within a card, although this is more like Atkinson's MacPaint 1.0 than standard Macintosh applications. It's also possible to have multiple stacks open at a time.

HyperCard 2.0 also supports several other features that make it easier to develop stacks, including improved script editing and debugging, built-in icon editing and floating tool palettes.

Such improvements cement HyperCard's advantages for in-house development. It was already much easier to write and debug a HyperCard stack than a Mac program written in C or Pascal. More people can become good HyperTalk programmers than will ever be C toolbox wizards.

And while the resulting program may not have the polish of a custom C-based application, it's a lot easier to write and maintain — an acceptable trade-off for a program that will be used by 100 people instead of 100,000.

All of these advantages also apply to the major HyperCard alternative, SuperCard 1.5. While HyperCard 2.0 nullifies many of SuperCard's authoring and debugging advantages, SuperCard offers graphics advantages that are essential for many applications. SuperCard provides an integrated gray-scale/color capability and also supports MacDraw-type object graphics instead of HyperCard's MacPaint-style bit maps.

In the future, both products' most important application will be as user-customizable interfaces for information retrieval. Whether it's browsing through a commercial CD-ROM or querying the company mainframe, this is an area where HyperCard (or SuperCard) should be considered the tool of preference.

What's more, HyperCard will assume a greater role once applications are available that take advantage of Interapplication Communications provided by System 7.0. When that happens, HyperCard will become the front-end shell that the Macintosh always needed but never had. □

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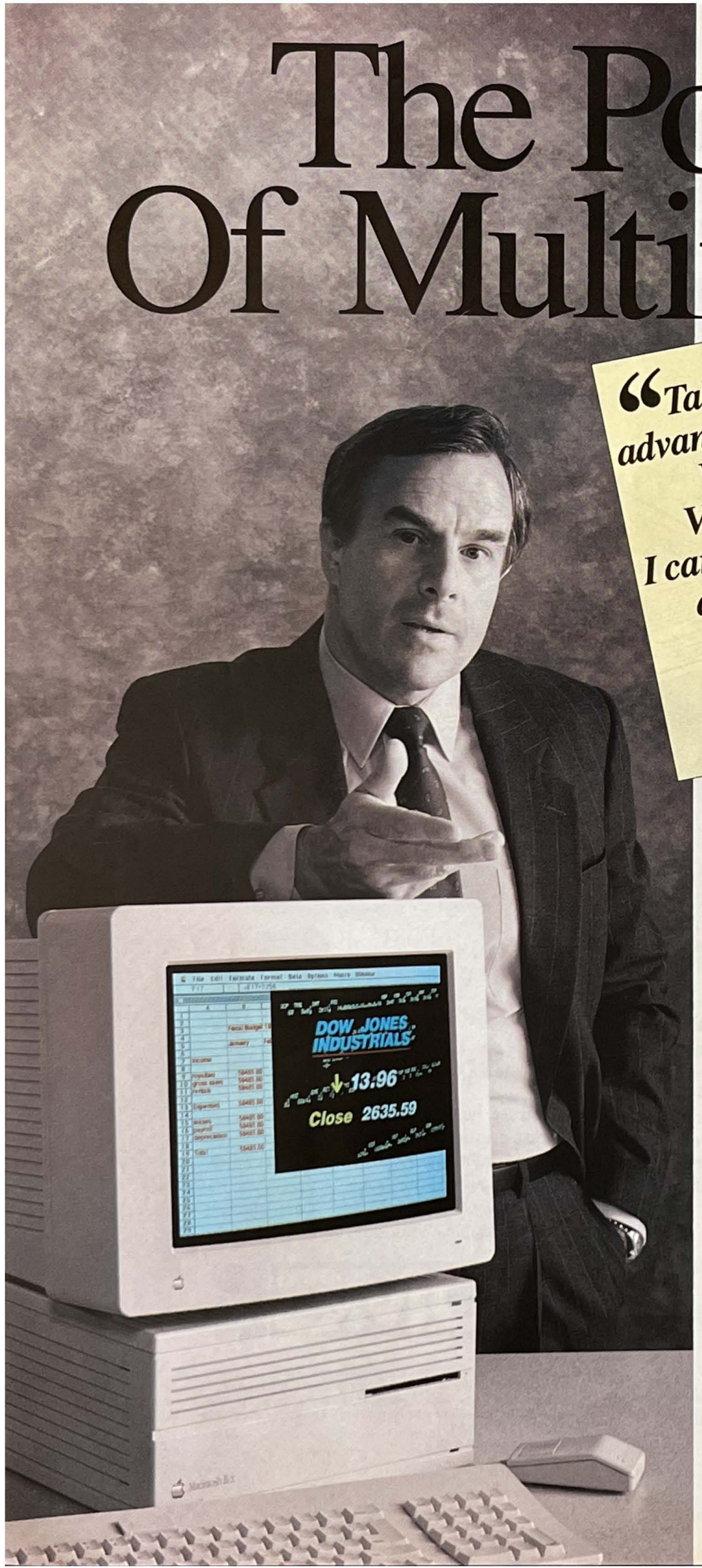

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Expansion choices: NuBus flexibility vs. PDS power

Unlimited expansion via NuBus slots in the Mac II family bring a feeling of security to many, but the SE's single PDS slot may give you all the expansion you need.

By Clay Andres

Conventional wisdom has it that Mac IIs, because they are more powerful than SEs, are the best choice for most business and engineering applications. But only the top-of-the-line IIfx comes with substantially more processing power than an SE/30. And you can have two SE/30s at $3,869 each for the price of a marginally configured IIfx ($8,969 without display).

NuBus: Real and perceived advantages. The aura of power surrounding Mac IIs (even the original II, which is substantially slower than the SE/30) is also the result of multiple NuBus slots. Whether you use them or not, lots of slots and the sense of potential for unlimited expansion bring a feeling of security. Yet many NuBus slots go empty.

"The overwhelming primary usage of the first NuBus slot is for video," said Frank Casanova, product line manager for high-end CPUs at Apple. "The second slot is split evenly between a second video card and communications, either Ethernet or token ring. The third category, "other," is for things like data acquisition and analog conversion boards." Because Apple has integrated many popular functions onto the Mac's motherboard, most people don't need to use more than one slot for video and IIci owners don't even need that.

Reality notwithstanding, the arguments for expansion potential are compelling. "I will definitely want to add some sort of video input/output card some day," said Becky Smith, an independent filmmaker in Palo Alto, Calif. "If I had bought an SE/30 instead of a IIcx, I would feel trapped. It was worth the extra $900."

Even though there are video production boards for the SE and Plus, the selection is limited. High-end boards, such as the NuVista from Truevision Inc. and Moonraker from Workstation Technologies Inc., only come in NuBus versions, and Mass Microsystems Inc.'s special-effects boards, the ColorSpace IIi and IIfx, require two slots (although Mass Micro recently shipped the ColorSpace Plus/SE, which uses a video adapter to avoid using a slot at all).

The problem is the same for other hardware-intensive applications, such as multimedia, data acquisition and process control. There are SE products but not the depth and breadth of boards available for NuBus-equipped Macs.

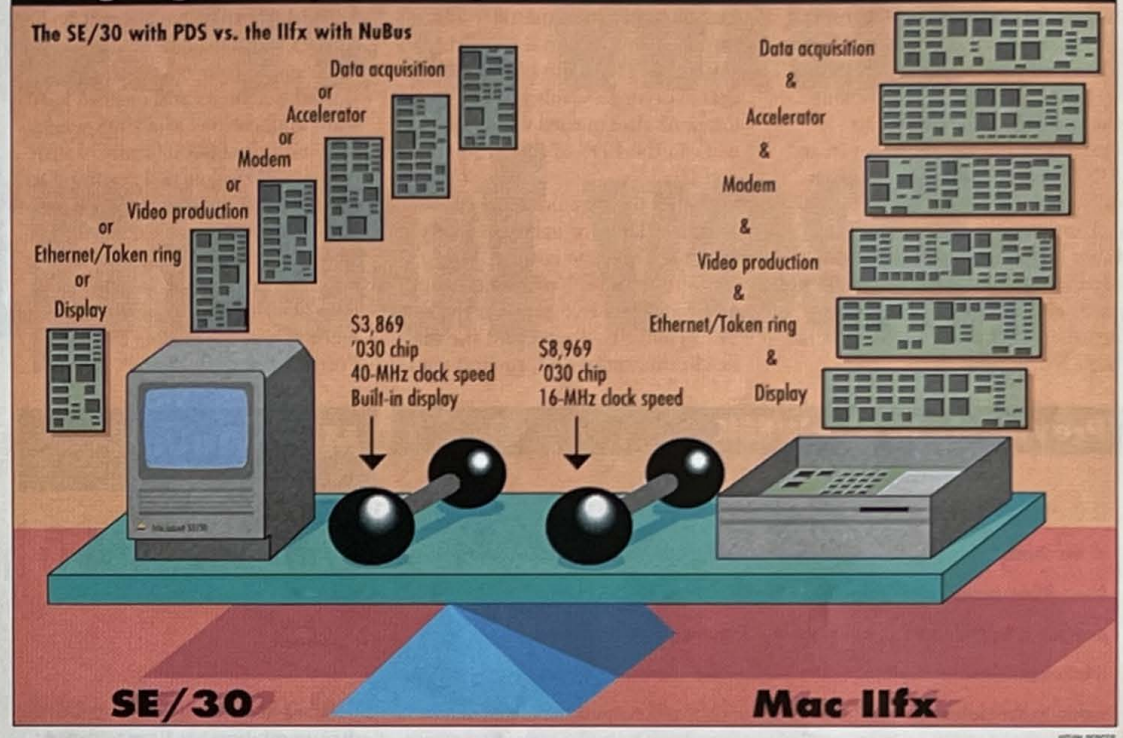
While the Mac users involved in experimental engineering and manufacturing know that they will need expansion and can plan accordingly, other users just want to keep their expansion options open for video or multimedia. NuBus gives them insurance for the future.

"If you buy a NuBus board, no matter what function it serves, it works across the Mac II family," said Steve Goodman, director of marketing at DayStar Digital Inc. "If you're a developer, you have more potential hosts for your product."

Processor Direct Slots: The bottom-line advantage. In the best of all possible expanding universes, every add-in card would be compatible with every Macintosh. SEs would have at least one NuBus slot, and life would be simpler for buyers, retailers and manufacturers.

See NuBus, next page

Weighing the expansion options



KEVIN BERGER

Different slots for different Macs

If users had been told when the first SE and Mac II were introduced that two expansion slots would multiply to eight by the end of the decade, they wouldn't have believed it. Yet today users are faced with eight incompatible ways to plug into Macintosh models that have slots.

▸ **NuBus.** The one expansion that is compatible across Macintosh models is NuBus. It's what makes the Mac II family different from an SE or SE/30, because it allows multiple cards to be used simultaneously. Compact IIs (the IIcx and IIci) have three NuBus slots, and full-size IIs (the II, IIx and IIfx) have six.

NuBus is a bus architecture designed by Texas Instruments Inc. and adopted by Apple. Unchanged since the first Mac II, any NuBus card will work in any Mac II and is likely to remain compatible for the foreseeable future. Even planned improvements in NuBus speed won't make current cards obsolete.

▸ **Processor Direct Slots.** The PDS is not a true bus like NuBus in that it has no intelligence. It is an extension of the pins that connect the Motorola processor to the Mac's motherboard. Any board plugged into a PDS has direct access to the processor, making it potentially faster and cheaper than a NuBus board. But you can have only one PDS.

PDS is processor-specific, resulting in four PDS architectures: one each for the SE, SE/30, Portable and IIfx. You get optimum performance but no compatibility. The 68000 in the SE and Portable has 96 pins, while the 68030 in the SE/30 and IIfx has 128 pins. But the protocols, shapes and sizes are all different, so although you can plug an SE/30 card into the IIfx, it won't work.

▸ **Cache slot.** This is a single-purpose slot in the IIci for a small amount of especially fast memory. It improves performance by storing the most recently used instructions where the processor can get at them quickly. The IIfx has a cache built in.

▸ **Modem and RAM slots.** The Portable has two single-purpose slots besides its PDS: an internal modem slot and a RAM slot. The RAM slot lets users expand the Portable's RAM with static RAM, pseudo-static RAM, dynamic RAM, single-board and piggyback-board designs.

NuBus

From previous page

Unfortunately, NuBus adds a level of complexity to both the engineering and manufacturing of Macintosh IIs that is reflected in their higher price. Therefore, putting a more expensive bus, such as NuBus, into a less-costly machine, such as the SE, didn't make sense to Apple. As a result, SEs expand via a Processor Direct Slot (PDS). It not only saves money but is actually more efficient than NuBus. It's possible to make boards that run faster in an SE/30 than in any of the NuBus-only IIs.

Furthermore, it's difficult to build a NuBus-based accelerator card. That's why Mac II accelerator cards clip directly to the existing processor. It's also why the IIfx has both NuBus and PDS.

"We've been shying away from the NuBus, because the 10-MHz transfer rate is too slow," said Roger Caspen, director of marketing at Newer Technology. "If you're doing heavy desktop publishing, even with a 25-MHz accelerator you sit there thinking, 'What a dog; this should be faster.' With the '030 direct slot, you can add caching and direct memory access for SCSI support on a 33-MHz '040 card. That's the blowout card that everyone's waiting for." But Caspen's dream card would only work in the PDS of the SE/30 and IIfx.

For all the expandability of NuBus, SEs have nearly as many options. The June issue of MacUser found nine NuBus Ethernet interfaces and five each for the SE/30 and SE. To get past the one-slot limitation of SEs, several manufacturers make combination video/accelerator boards that use only a single slot. There are also accelerators that clip onto the existing processor and external network interfaces that use the SCSI port, neither of which requires a slot at all.

Future expansion. For multiple add-in cards, NuBus will be Apple's standard bearer for the foreseeable future. For single-slotted machines and custom hardware applications, the PDS works best with the 68000 family of processors. PDS slots will continue to be processor-specific, which means that new 68040 machines will spawn another PDS design. There may also be new single-purpose slots like the IIci cache slot and the modem and RAM slots in the Portable. □

PriceWatch
ACCELERATOR BOARDS

Item	List price	Street price	Source, Location
DAYSTAR DIGITAL INC.			
33-MHz PowerCard 030 (for Mac II, IIx, IIcx)	$1,995	$1,595	Entre Computer Center Lake Charles, La. (318) 477-8870
DOVE COMPUTER CORP.			
32-MHz MaraThon 030 Accelerator (for Mac II, IIx and SE)	$699	$594	Ferranti/Dege Computers Boston, Mass. (617) 232-2550
SICLONE SALES & ENGINEERING CORP.			
33-MHz Si3033	$1,799	$1,450	MacAdam
with 6882 coprocessor	$1,999	$1,750	San Francisco, Calif.
(for Mac II and IIx)			(415) 538-7368
TOTAL SYSTEMS INTEGRATION			
25-MHz Gemini 020/030	$1,495	$1,245	CJS Systems
with math coprocessor	$1,995	$1,575	Berkeley, Calif.
(for Mac SE)			(415) 849-3730

Previously in MacWEEK

COLORSPACE IIi AND COLORSPACE FX

In our April 17 issue, MacWEEK took a look at the ColorSpace boards from Mass Microsystems Inc. Although as a team they are expensive, the boards provide a high degree of functionality. Together, they let you generate NTSC (National Television System Committee) video signals and bring high-quality video to the desktop. The IIi offers genlocking and outputs combined video and graphics. The FX gives full-motion, full-color video from NTSC sources.

NUVISTA

MacWEEK reviewed the first generation of NuVista boards from Truevision Inc. in its Aug. 15, 1989, issue. As the first real-time color capture board for the Mac, NuVista had a lot to offer. (An improved version, NuVista+, is scheduled for release later this month.) We found that it worked perfectly and that creating and capturing images was easy and simple. NuVista lets you capture and overlay video, and has genlock, NTSC and PAL (a European video standard) multiscan capabilities.

Product Info

DAYSTAR DIGITAL INC.
33-MHz PowerCard 030 (for Mac II, IIx and IIcx): $1,995
5556 Atlanta Highway, Flowery Branch, Ga. 30542;
(404) 967-2077;
(800) 962-2077

DOVE COMPUTER CORP.
32-MHz MaraThon 030 Accelerator (for Mac II, IIx and SE/30): $699
1200 N. 23rd St., Wilmington, N.C. 28405;
(919) 763-7918;
(800) 622-7627

MASS MICROSYSTEMS INC.
ColorSpace IIi: $2,299.95
ColorSpace IIfx: $3,499.95
ColorSpace Plus/SE: $1,995 (promotional price through August: $1,195)
810 W. Maude Ave., Sunnyvale, Calif. 94086;
(408) 522-1200;
(800) 522-7979

SICLONE SALES & ENGINEERING CORP.
33-MHz Si3033 (for Mac II and IIx): $1,799; with 6882 coprocessor: $1,999
107 Bonaventura Drive, San Jose, Calif. 95134;
(408) 456-5060;
(800) 767-8207

TOTAL SYSTEMS INTEGRATION INC.
25-MHz Gemini 020/030 (for Mac SE): $1,495; with math coprocessor: $1,995
99 W. 10th Ave., Suite 333, Eugene, Ore. 97401;
(503) 345-7395;
(800) 874-2288

TRUEVISION INC.
1-Mbyte NuVista: $2,995
2-Mbyte NuVista: $4,495
4-Mbyte NuVista: $6,495
1-Mbyte NuVista+: $2,995
2-Mbyte NuVista+: $3,595
4-Mbyte NuVista+: $4,795
7340 Shadeland Station, Indianapolis, Ind. 46256;
(317) 841-0332, Ext. 8118

WORKSTATION TECHNOLOGIES INC.
Moonraker: $2,995
18004 Sky Park Circle, Suite 240, Irvine, Calif. 92714; (714) 250-8983

MacInTouch

RIC FORD AND RICK LEPAGE

PageMaker 4.0 help: Books, tips and shortcuts

BUGS & TIPS

Real-world tips. Aldus Corp.'s documentation for PageMaker 4.0 is well-written and essentially complete, but it does not successfully cover all aspects of the complex program. Two recently published books attempt to fill this gap.

The first book, "Real World PageMaker 4" by Olav Martin Kvern and Stephen Roth, was published by Bantam Doubleday Dell Publishing Group as part of the Bantam-ITC series. Subtitled "Industrial Strength Techniques," this book, priced at $24.95, is a sturdy reference manual for both PageMaker novices and experts that complements the Aldus manuals well.

Kvern and Roth detail PageMaker 4's strengths and weaknesses in an economical style. Their discussion of PageMaker's indexing features alone is worth the price of the book, as are the large number of prominently marked tips and work-arounds. The index and table of contents (generated with PageMaker 4) are thorough, and there is even a special index of the tips listed in the book.

One impressive feature of "Real World PageMaker 4" is its coverage of related utilities. Many books written about applications tend to concentrate solely on the product, as if it were to be used in a vacuum. Kvern and Roth discuss many third-party programs that can be used to enhance your productivity with PageMaker.

Not only are programs such as CE Software's QuicKeys discussed, but tips on using Apple's ResEdit and Adobe's LaserTalk in conjunction with PageMaker are covered as well.

KEVIN BERGER

"Real World PageMaker 4" is one of the best application-specific books we have seen in a while. Anyone who plans to use PageMaker intensively should pick up this volume.

Getting started. The other book, "PageMaker 4 by Example" by David and Tony Webster, is aimed more toward the novice user than the experienced PageMaker hand. Published by M&T Books Inc. and priced at $24.95, it is not as successful as "Real World PageMaker 4," largely because its scope is limited.

"PageMaker 4 by Example" is useful as an adjunct to PageMaker's "Getting Started" manual. The book walks through the application from top to bottom, offering a detailed, step-by-step tutorial in the process. To help the learning process, M&T offers the examples on floppy disk. If purchased with the book, the disk is $10 extra; if purchased later by mail, the disk is $20.

New users of PageMaker will be the main beneficiaries of "PageMaker 4 by Example," but structurally it lacks the layout and make-up that would make it a mainstay on the reference-book shelf after the tutorial has been completed.

On-line shortcuts. Like any program of its size and complexity, PageMaker 4 has a number of keyboard shortcuts and hidden methods for performing many actions. Mark Teranishi and Paul Sorrick have created a shareware desk accessory called PM4 ShortCuts that places hundreds of PageMaker tips and keyboard shortcuts in an easily readable format.

The DA has 10 screens that cover such topics as text editing, kerning, navigating through documents, and graphics placement and manipulation. There is also a list of metacharacters for use in the Find/Change and Index dialog boxes.

Teranishi and Sorrick have done a good job of creating an accessible electronic reference to PageMaker 4, and the $10 shareware fee is well worth it. PM4 ShortCuts is available from the Zmac download libraries, other on-line services and user groups.

REFERENCES

Bantam Doubleday Dell Publishing Group, 666 Fifth Ave., New York, N.Y. 10103; (212) 765-6500.

M&T Publishing Inc., 501 Galveston Drive, Redwood City, Calif. 94063; (415) 366-3600.

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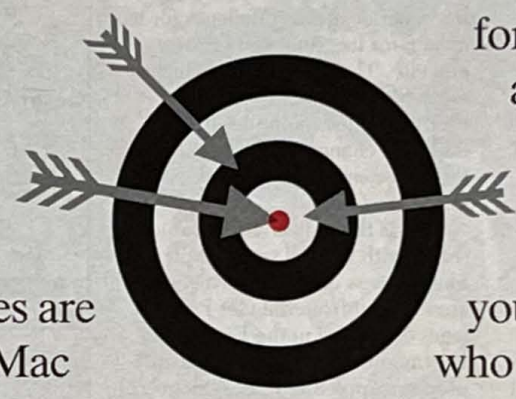

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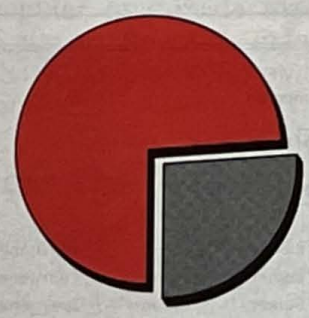
The "20/80 rule" in the Mac market

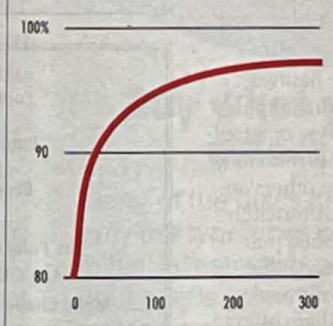
74% of business Macs are installed in 6% of Mac sites



Source: 1989 COMTEC Study, The Gartner Group

The "rich get richer rule" in the Mac market

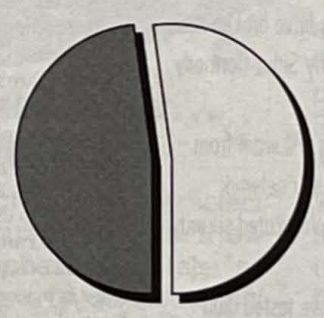
Percent planning to buy Macs related to number of Macs installed



Source:Nov. 1989 The Research Spectrum

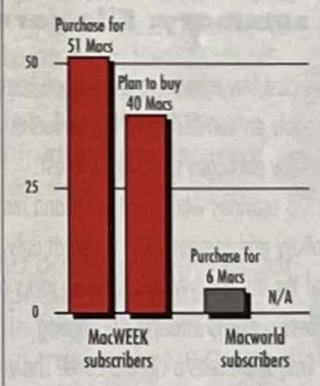
Half of Macworld's subscribers have no plans to buy any Macs

Macworld subscribers not planning to purchase any Macs



Source: Aug. 1989 Macworld magazine, page 115

MacWEEK subscribers purchase for more Macs and plan to buy more



Source: Nov. 1989 The Research Spectrum; 1989 Simmons Market Research Bureau

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If you're not buying weekly, you're buying weakly.

COMPARISONS

Committing yourself to a non-dedicated file server

Three products try to top Sitka

By Alexis Rosen

For years, if you wanted a Macintosh file server, TOPS was the main alternative to AppleShare. Smaller sites especially appreciated the ability to share the contents of users' hard disks without dedicating a Macintosh. But recently, three companies introduced competing servers: EveryWare Inc.'s allShare 1.08, ShirtPocket Software's EasyShare and Information Presentation Technologies Inc.'s Personal Server Network 2.0. Sitka Corp. (formerly TOPS Corp.) also released Version 3.0 of its Network Bundle for Macintosh, which includes its famous file-sharing software. We evaluated all four of the new non-dedicated file servers. (We also looked at prerelease versions of System 7.0's built-in Macintosh File Sharing and SingleShare, a shareware server. See related stories, pages 40 and 42.)

Installation, documentation. EasyShare, allShare and Personal Server Network (PSN) all have good, simple manuals with many illustrations. Sitka's Network Bundle comes with several slickly packaged manuals. These are much longer than the others but are well-illustrated, well-indexed and cover the additional software in the package.

Installing any of these servers is easy; you either drag a few files to the System folder or run an installer program. PSN comes with an installer that allows you to set the maximum number of open files and the size of the system heap. Control over these settings is often necessary when trying to run file servers on Macs with many Startup documents (INITs) or with many file-server clients. None of the other products provides these controls. PSN's installer was not quite bullet-proof: It permitted us to set the system heap to a mere 3 bytes, and it failed to install correctly if the PSN floppy was not the start-up disk.

Sitka's Network Bundle installer was simple and convenient, but it would not install if MultiFinder was running. The Network Bundle, EasyShare and allShare ran comfortably with various other INITs; PSN was more demanding, and getting it to work alongside several INITs was problematic.

Controlling access. In AppleShare, folders on the server are "owned" by individual users and also can belong to a group. Users can be members of groups and so can have access to folders they don't personally own. Each folder has separate access privileges for its owner, for its group and for everyone else. These privileges, which are set independently, permit a user to see and open files in the folder, to change and delete files in the folder, and to see subfolders inside the folder.

PSN is the only non-dedicated server with the full set of AppleShare access controls. Privileges are even set from the Get Privileges command in the Finder's File menu, the same mechanism used for AppleShare. EasyShare and Sitka's Network Bundle allow only one set of access controls per "published" object, but individual folders can be published as well as whole volumes. Each can have a separate password, and many different objects can be published at once. This provides an acceptable level of security in most situations, but it can be less convenient than the full AppleShare privileges when dealing with many users.

EveryWare's allShare has two security modes. In the first, it publishes every volume it sees; one folder can be designated as private or as a drop folder, and all the others are accessible to everyone. Alternately, one folder can be published publicly, and everything outside that folder is inaccessible to network clients. In addition, allShare offers an option that prevents users from deleting any files, but this is only useful in special situations, since users can still alter file contents. The server allShare is not suitable for environments that require fine-grained control over access.

Configuring the servers. Because it offers few options, allShare is the easiest server to configure. Everything is handled through a Control Panel device (cdev). The password can be set, and a slide control determines how

See File sharing, Page 40

Reviews in Brief: SUPERCARD 1.5

SuperCard 1.5

Version 1.5 is a major upgrade to Silicon Beach Software's SuperCard; besides fixing a number of bugs and inconsistencies, Version 1.5 adds a host of new features that should continue to make it a strong platform for multimedia development.

Probably the best part of the upgrade is the new Runtime Editor, which is much cleaner and faster than the first version. It also includes a number of new utilities, such as a Preferences dialog box that lets you configure keyboard shortcuts.

A very significant extension to SuperCard is the ScriptTracer, an integrated SuperTalk debugger. This debugger allows you to step line by line through your scripts, examine variables, edit scripts and in general keep a close eye on what's going on inside scripts. If debugging is enabled when a script error occurs, a new button in the error alert box lets you enter the debugger. You also can debug an entire script at once. Our only complaint about ScriptTracer is that the movable dialog box it presents takes up much of the screen on Mac Pluses and SEs, making it hard to see what the script might be doing to the card underneath the debugging window.

SuperCard 1.5 also lets you have greater control of menus. You can create both hierarchical and pop-up menus (neither of which will apparently be supported by HyperCard 2.0). While you still cannot create menus in SuperCard (you must use SuperEdit to do this), you can now create the items that will be part of menus. In a related vein, SuperCard 1.5 lets you create list-type fields, which allow users to click on lines and have those lines highlight automatically. Special messages are sent to the field when the user clicks on it.

Other additions to SuperCard and SuperTalk include customized error dialogs; colored text; the

See Reviews in Brief, Page 43

In summary: File servers

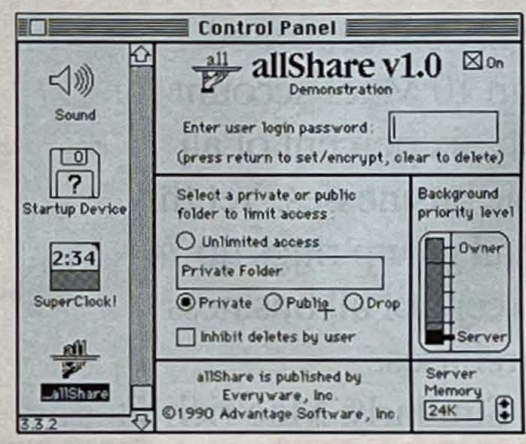
In the past few months, several small companies have broken the monopoly on non-dedicated file servers enjoyed by Sitka (formerly TOPS). We reviewed three new packages and Sitka's latest.

EveryWare's allShare 1.08 provides what most users and managers will want from this kind of program: simplicity and compatibility. Priced at only $250 per network zone, it is the best value of the lot. EveryWare's allShare lacks any sophisticated security features, however, so it's best suited to informal file sharing.

ShirtPocket Software's EasyShare runs a close second. The version we tested didn't work with multi-user databases, but the 1.1b update should. EasyShare does let you publish multiple folders or volumes and password-protect each.

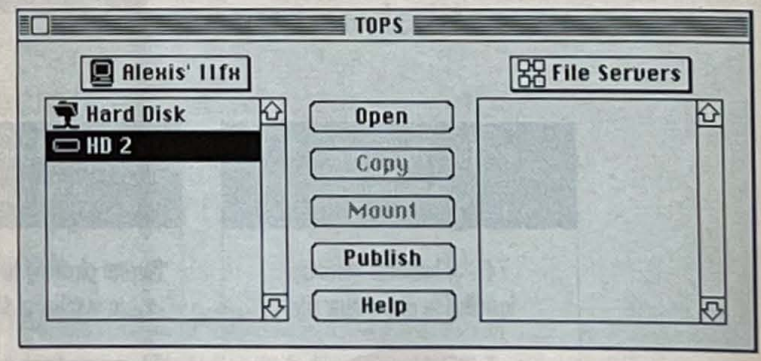
Information Presentation Technologies' Personal Server Network 2.0 is the most full-featured of the servers we reviewed. It emulates AppleShare's suite of access privileges and lets you publish folders individually. Unlike allShare and EasyShare, PSN lets two users mount each others' disks simultaneously. PSN was the most finicky about other INITs during installation and operation, however.

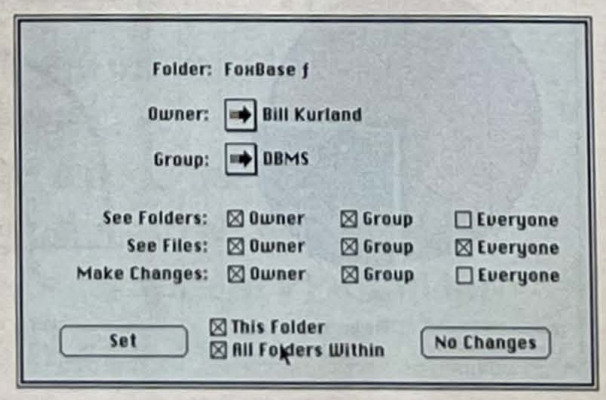
Sitka's Network Bundle is the leader in this market, and Version 3.0 is an important upgrade because it appears to have fixed problems with multi-user databases. Although it includes E-mail and file translation, the Bundle is much more expensive than the competition. If your primary concern is file sharing, it is not a good value.



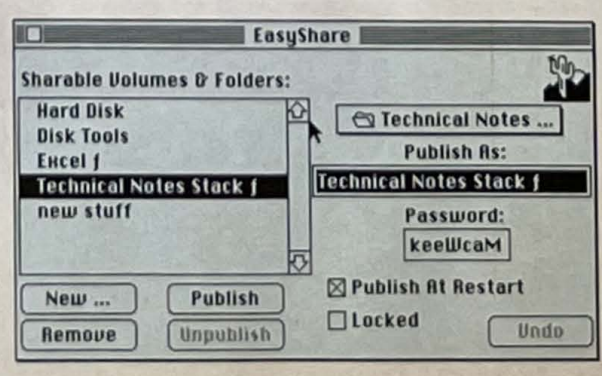
EveryWare's allShare (left) is the simplest non-dedicated file server to configure; all its controls reside in a single cdev.

Sitka's Network Bundle for Macintosh 3.0 (below) uses its own client software. Although it has a somewhat non-standard interface, this software lets two users publish each others' hard disks without crashing.





Personal Server Network 2.0 (left) is the only non-dedicated file-sharing software to emulate the full suite of AppleShare access privileges.



EasyShare from ShirtPocket (left) Software lets you publish and password protect individual folders.

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Server specs

Feature	AppleShare 2.01	allShare 1.08	EasyShare	Network Bundle for Macintosh 3.0	Personal Server Network 2.0
Access control	By folder	One folder only	By folder or volume	By folder or volume	By folder
Approximate server RAM usage	All available	35 Kbytes + 5 Kbytes per user	35 Kbytes	130 Kbytes	100 Kbytes [1]
Cross-mount servers	n/a	No	No	Yes	Yes
Fully AFP-compatible	Yes	Yes	No	Yes [2]	Yes
Desktop Manager-compatible	Yes	Yes	No [3]	No	Yes

[1] *RAM use varies with the number of files and folders published; figure given is for typical 80-Mbyte hard disk.*
[2] *The Network Bundle now appears to work with all multi-user databases.*
[3] *Clients don't see correct icons if the server is running Desktop Manager.*

File sharing

From Page 38

much processor time is allocated to server tasks vs. local actions. The amount of memory consumed (and thus the maximum number of simultaneous users) also can be controlled. This allows an allShare server to handle more simultaneous users than others we reviewed.

EasyShare and Sitka's Network Bundle are configured from desk accessories. Both were easy to use, although Sitka's DA violates the Macintosh interface in a few subtly disconcerting ways. These DAs allow volumes and folders to be published, password-protected and unpublished. They also specify which objects will be published on start-up.

PSN is configured by a self-named application. It offers some convenience features not provided by the others, such as the capability to set the Shared and Read-Only bits on applications. (You do this at your own risk. Some applications, such as Claris' MacDraw II, won't work when this is done.) PSN also allows you to specify which volumes are published when the Macintosh starts up, but the PSN program must be a start-up application itself for this to work. Compared with the other products, this start-up sequence is inconvenient and inelegant, though not crippling.

Accessing the servers. All of the servers except Sitka's use the AppleShare client software that comes free with every Mac. This software is easy to use, and users not yet familiar with it will find it easy to learn.

However, there is one big problem with all the servers (except PSN) that use Apple's client software. If two servers try to mount each others' disks, both will most likely crash. In other words, if person A is using person B's disk, B can't reliably use A's at the same time. PSN gets around this problem by altering Apple's client software. This is a significant and impressive accomplishment, but it may increase the fragility of the client software. Sitka's Network Bundle is not subject to this problem, because it uses its own DA.

Multi-user databases. The multi-user databases Omnis, 4th Dimension and FoxBASE+/Mac all require file servers. (FileMaker and Helix don't.) These three use the Shared Environment of AFP (AppleTalk Filing Protocol) to access parts of their data files without conflicting with other users.

PSN and allShare provide complete AFP services for databases. EasyShare 1.0 does not work with these multi-user databases; however, the company said the Version 1.1b, available free to users, corrects this problem. Sitka's Network Bundle provides some parts of AFP and is sufficiently compatible to support Omnis and 4th Dimension. Earlier versions of the Network Bundle would not work with FoxBASE+/Mac, but recent changes in both products appear to have corrected these problems.

PSN can support the Shared Environment, but it does so by adding complexity in the form of two server modes: limited and unlimited. AFP is fully supported for network clients in both modes, but the server provides AFP to the local user only in limited mode. Unfortunately, limited mode slows down disk performance for the local user by 300 percent to 350 percent. Until recently, there was a good justification for this modality: FoxBASE+/Mac wouldn't run under PSN without it. However, Fox Software Inc. has fixed its database, and limited mode is now a unnecessary inconvenience.

Memory usage. On Macs with only 1 Mbyte of RAM, memory consumption is a critical issue. Once you add a few INITs and create a RAM cache, there is little extra room for file-server software. AppleShare's slim client software uses 15 to 25 Kbytes of RAM and about 45 Kbytes on-disk.

Compared with that, Sitka's Network Bundle is a memory hog. Though users have been requesting it for years, Sitka has not separated the client and server segments of its product. Those who use a Sitka server, even if they don't want to publish their own disks, must run the server software. The package uses up about 130

See File sharing, Page 42

System 7's File Sharing: New networking chapter?

System 7.0 is months away, at least, but when it arrives, it will have a shattering impact on the file-server market. The built-in Macintosh File Sharing is some of the most exciting software we have seen from Apple in years, and it will obviate the need for many existing file servers.

System 7.0's File Sharing is integrated into and controlled from the new Finder. It is a superset of AppleShare, supporting all of AppleShare's features and adding many more:

- Selected folders or entire volumes may be published.
- Individual folders may be marked so they cannot be moved, renamed or deleted.
- Groups may contain other groups.
- Folders may be owned by groups and published only for certain users or groups.
- Macintosh File Sharing can be set to provide more or less time to network clients, just like allShare.

The Finder reflects the network status of objects by changing their icons. For example, a published folder appears with attached network cables, and folders with active users are imprinted with user icons. Shared objects' names appear in boldface.

File Sharing provides the complete Shared Environment of AFP. Multi-user databases will do appropriate record locking from either the server or client.

Although this feature is not clearly documented yet, File Sharing also supports Interapplication Communications over the network. This means that you can set one Macintosh to accept instructions from another. Macs accepting IAC events could, for example, run applications and deliver the results to their clients. Users control which clients can use IAC with their computers.

The File Sharing Monitor Control Panel provides a gauge of client usage, a list of published objects and a list of current clients. We had problems with the development version, but when working properly, the monitor will allow you to disconnect one or more users and unpublish one or more objects.

RAM prices are dropping every week. Upgrading a Mac to a healthy 4 Mbytes to run System 7.0 and Macintosh File Sharing costs less than the more expensive products we reviewed. It makes no sense to hold off on purchasing one of the current file servers if you need one now, but you also should be thinking ahead to what next year will bring. — *By Alexis Rosen*

Managing the Desktop

Desktop Manager is an Apple Startup document (INIT) meant for use on an AppleShare server. It changes the way the Mac keeps track of files and improves the performance of the Finder by 10 to 20 times for some operations. On large disks with many different programs and files, such as file servers, Desktop Manager may be absolutely necessary.

Desktop Manager can be used with all recent Mac operating systems, but it works best with Finder 6.1.4 and later, especially if you use removable media, such as SyQuest or Bernoulli drives. After installing the INIT, some users may notice that some file or application icons are incorrect; rebuilding the Desktop file cures that problem.

Both allShare and Personal Server Network are Desktop Manager-friendly, but we did sometimes notice allShare showing a few strange or missing icons on some clients. EasyShare won't show any icons correctly if running with Desktop Manager, and Sitka's Network Bundle won't run at all with it installed. SingleShare requires Desktop Manager (see related story, Page 42).

The functionality of Desktop Manager is built into System 7.0. Until then, it can be obtained informally from users and dealers, since Apple doesn't sell it or distribute it alone. — *By Alexis Rosen*

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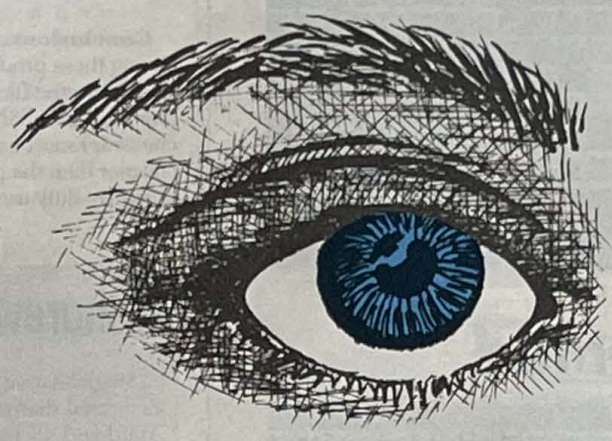

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File sharing

From Page 40

Kbytes of RAM. Sitka's Network Bundle also uses up more disk space than the AppleShare client. This is insignificant for users with hard disks but important for clients with only floppy drives.

The PSN server uses a variable amount of RAM, depending on the number of files and folders on the disk. On a typical 80-Mbyte hard disk, the PSN server should take 100 Kbytes of RAM. This isn't particularly good, but client-only Macs don't need to run this part of the software. Furthermore, PSN is doing more work than the others, since it keeps track of a full set of AppleShare access privileges.

EveryWare's allShare consumes 35 Kbytes, plus about 5 Kbytes per client. Unlike the other servers, allShare lets you specify how much RAM you want it to use. For six simultaneous clients, it would require about 65 Kbytes. EasyShare, which handles neither complete AFP nor a complicated privileges scheme, needs a mere 35 Kbytes to run.

How fast? We tested all four servers under a variety of conditions, and all demonstrated similar performance: about 70 percent to 75 percent of the speed of an AppleShare server. EasyShare showed a very slight edge over the others in client disk access, and client activity had a slightly lesser impact on a Sitka server's local performance. The one big exception was PSN in its limited mode, when local activity was quite slow. In unlimited mode, its server performance was about the same as the others.

How much? The pricing for these four products is all over the map. The big winner in this area is allShare, which costs $250 per network zone. With allShare, you can make every Mac a potential server for only a few dollars each, since most network zones contain about 20 to 30 Macs. EasyShare would look excellent if allShare weren't for sale. Priced at $149 per server, EasyShare still provides a good value. Since up to nine client Macs can access the server simultaneously, your cost would be less than $20 per user.

Compared with these aggressive prices, PSN and Sitka's Network Bundle look extravagant at $149 and $249, respectively. With both these packages, you must buy software for every user, even for Macs that will not be used as servers.

Conclusions. Despite the differences among these products, there is no one best non-dedicated file server for all situations. Nonetheless, allShare 1.08 will be the clear choice for most users. It is dramatically cheaper than the others; it is also excellent for heavy-duty use because it can be config-

See File sharing, next page

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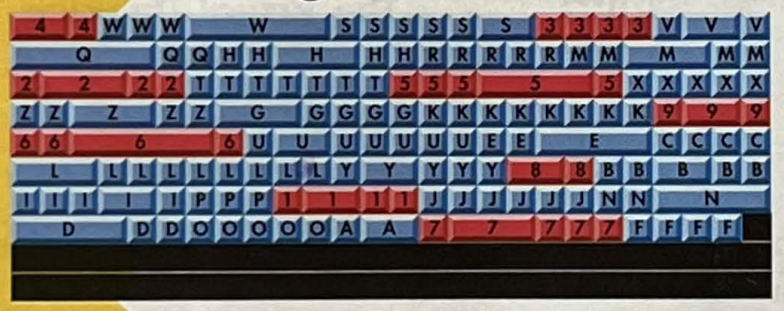

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A shareware server

SingleShare is a not-quite-finished non-dedicated shareware file server written by Matthias Urlichs. It can be installed as a Startup document (INIT), or it can run as an application under MultiFinder. The latter alternative is unique and offers some advantages over other products. For example, it can be activated and deactivated at will, thus regaining the 100 Kbytes or so of RAM it uses. SingleShare supports, and in fact requires, the Desktop Manager INIT (see "Managing the Desktop," Page 40). The Shared Environment of AFP, necessary for multi-user databases, is not currently supported.

Like EasyShare, SingleShare can publish both folders and entire volumes. It provides for groups and users, just like AppleShare, but it permits only one privilege setting for each published object. In other words, a folder within a published folder can't have different privileges.

SingleShare is nearly as fast as the other products we reviewed. It can be configured to run slowly, so it won't affect the local user as much. SingleShare comes with a complete but somewhat dense manual. It is easy to install; configuring it is not difficult, but the interface is not pretty.

On the barest Macs, SingleShare is quite stable, but it has a number of problems in typical situations: It conflicts with many other programs; it can run on a Mac Plus, but it will crash occasionally; and it sometimes fails to show icons correctly on client Macs. A new version is due soon, and it may well correct these problems.

At this point, SingleShare is interesting but not polished enough to be useful. Since SingleShare is try-before-you-buy shareware, it might be worth your time to take a look. We wouldn't use it seriously, given the other options, but it's good for experimenting with file-server technology.

SingleShare 0.9b11 costs $65 for one zone, plus $25 for each additional zone. SingleShare is available from user groups and on-line services, including Zmac.

— By Alexis Rosen

Reviews in Brief

From Page 38

capability to set custom word, item and line delimiters; and the capability to open windows invisibly to improve perceived speed.

Also welcome with SuperCard 1.5 is a set of Bonus Projects, all written using SuperCard. These include Xtend, a nicely documented set of external commands (XCMDs) and external functions (XFCNs); a Help project, which includes a truly helpful Tips section; a SuperCard Encyclopedia listing resources for developers; and a directory of SuperCard developers. SuperCard's script language manual has been rewritten, as have the technical notes, and is a big improvement. A new manual gives a tour of the new features.

Not everything has been fixed in SuperCard 1.5. While the Tips stack has some good suggestions for speeding the program, SuperCard is still slow, especially when working with color bit maps. Script execution is faster than it was in Version 1.0, but it too could be speeded up, especially considering the compilation that will take place with HyperCard 2.0.

SuperCard 1.5 is an important enhancement. Silicon Beach Software has raised the price of SuperCard to $295, and this version is free to all who purchased Version 1.0. Silicon Beach's commitment to SuperCard is unimpeachable; the main question is how it will fare against HyperCard 2.0. So far the relationship between the two programs has been clear: SuperCard is a superset of HyperCard, and stacks created in HyperCard can be converted to SuperCard. This will not, at least initially, be the case after HyperCard 2.0 is released. Choosing a development environment will be more difficult than it is now, but we still feel that SuperCard includes a number of important tools not available in either version of HyperCard, and we expect to see some exciting products.

Silicon Beach Software is located at 9770 Carrol Center Road, Suite J, San Diego, Calif. 92126; (619) 695-6965. — *By Steve Michel*

File sharing

From previous page

ured to support many simultaneous users. It works fine with multi-user databases because it fully supports AFP without slowing down the local user. On the other hand, it is not suitable for users who have more than minimal security needs.

EasyShare is a nice product, but its slight edge in speed is not worth the extra cost over allShare. It can publish and password protect selected folders and may be preferred in environments where allShare's simpler security is not acceptable.

Both EasyShare and allShare are subject to the AppleShare-client cross-mounting problem. This is not a bug in these products, but it may rule out either for some users.

Personal Server Network 2.0's greatest strength is its complete duplication of AppleShare's access privileges, so it is the best non-dedicated server for environments in which security is the first priority. However, PSN is the most sensitive to INITs and other programs. It is not subject to the cross-mounting bug and thus is a good choice if cross-mounting is necessary on your network.

Sitka's Network Bundle for Macintosh is the only established product on the market; all the others have been introduced within the past few months. Sitka does have server and client software for DOS and Unix machines, and Version 3.0 of the Network Bundle includes a basic electronic-mail package and a set of file-format translators. When buying for more than a few Macs, however, it's cheaper and more flexible to buy these pieces separately.

Sitka's claim to fame has been its non-dedicated file server, and we think the high cost of the package is no longer justified, considering the excellent competition it now faces. □

Product Info

EVERYWARE INC.
allShare 1.08: $250 per zone
2176 Torquay Mews, Mississauga, Ontario, Canada L5N 2M6; (416) 821-9222

INFORMATION PRESENTATION TECHNOLOGIES INC.
Personal Server Network 2.0: $149 per client or server
5000 N. Parkway Calabasas, Suite 304, Calabasas, Calif. 91302; (818) 347-7791

SHIRTPOCKET SOFTWARE
EasyShare: $149 per server
P.O. Box 40666, Mesa, Ariz. 85274-0666; (602) 966-7667

SITKA CORP.
Network Bundle for Macintosh 3.0: $249 per client or server
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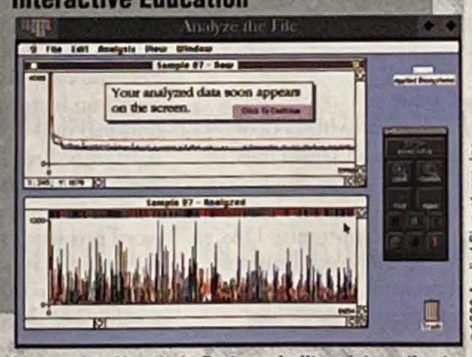

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REVIEWS

Full Impact takes best of the rest

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+ Big, fast and powerful with many customizable features; reads and writes Excel-format files; has integrated on-sheet graphics, including 3-D charts; programmer-friendly environment for recording or writing macros and custom applications.

− Virtual memory requires at least 2 Mbytes of disk space; creates large files; poor error handling; weak page-preview features; only eight colors.

By Clay Andres

Ashton-Tate Corp.'s Full Impact 2.0 comes to market with a long list of new features and enhancements. It has 3-D graphs, custom data formats, programmable buttons and intelligent recalculation algorithms. But the ability to read and write Excel-formatted files is the most important addition because it allows Full Impact users to work as equals in the Excel-dominated spreadsheet world.

Full Impact 2.0 is the first competing spreadsheet to import files from Excel 2.2 and 1.5 and export in 2.2 format. A Function Pack is included, which, when installed, adds all of Excel's built-in functions for complete spreadsheet compatibility.

The new import and export facilities worked flawlessly. We were able to open old Excel spreadsheets and send Full Impact spreadsheets to Excel users without taking any extra steps to convert the file or correct formats or formulas. However, novice users with complex Excel templates may be somewhat intimidated by having to load the Excel functions packet and use the stand-alone macro translator.

An abundance of charts. The flashiest new features are found in the charting function. Full Impact displays charts on top of the spreadsheet, which is useful for presenting numbers and graphs together. In addition to the standard 2-D chart types, there are 3-D bar and surface charts; 3-D views for bar, stacked bar and surface charts; and overlay charts.

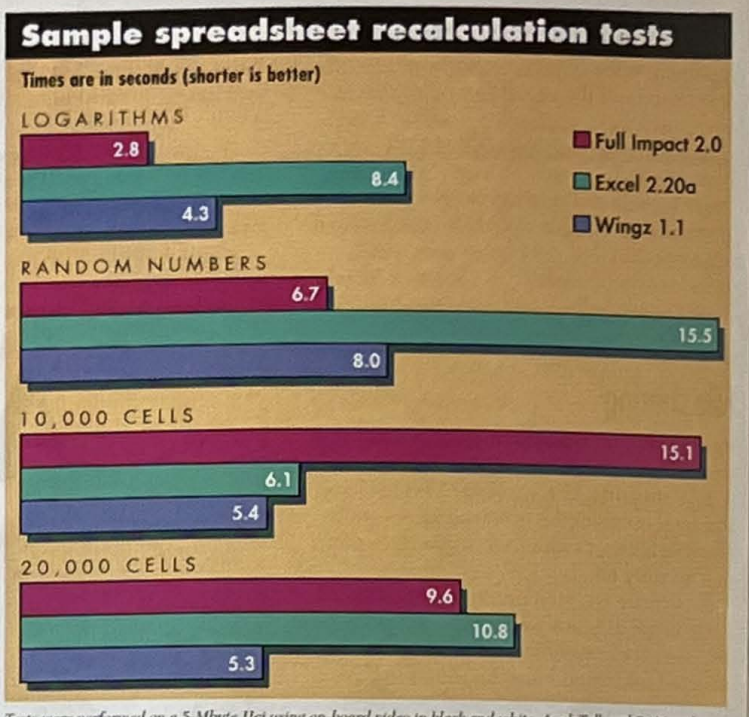
The 3-D views basically add drop shadows to a chart, yielding better-looking presentations. The true 3-D charts are similar to their counterparts in Wingz, but you can adjust views interactively.

By selecting two charts and choosing the Overlay Chart command, you create a third chart of the combined data. The data must match reasonably well to produce a meaningful chart.

Most chart settings are changed by using the Chart Info menu command. This works fine, but it's clumsy. You must close the dialog box to see how your changes look and, inevitably, you have to select the Info command several times to get everything adjusted.

Spreadsheets that look good. One of the features that distinguishes Excel is its custom data formats capability. For instance, you can display numbers preceded by the £ symbol. Full Impact 2.0 has matched this feature and added the ability to do simple calculations within the format. You can enter values in ounces and convert them to liters without entering a formula in the cell. Unfortunately, custom formats are spreadsheet-specific. There is no way, short of typing them again, to use the same format across many documents.

Full Impact always has been able to draw simple objects, such as arrows and boxes, on the spreadsheet. But cells and objects weren't linked, so changing the height of a row or the width of a column could throw the object out of alignment.



Tests were performed on a 5-Mbyte IIci using on-board video in black and white. AppleTalk and RAM cache turned off, no INITs running. Tests were performed several times and results averaged.

A new Borders command draws a line around a cell or range and adjusts when the cell changes.

One still-missing feature we'd like to see become standard in all Mac spreadsheets is the ability to edit cells directly instead of only in the edit bar. Ragtime 3 allows this, and it's extremely logical and convenient.

The program within the program. Full Talk, Full Impact's macro language, has been extended to include commands for all the added features of Version 2.0 and for two important new programming capabilities: buttons and function packs.

See Full Impact, Page 48

Zedcor's Desk draws on suite of seven DAs

Desk

Zedcor Inc.
List price: $399.95

+ Seven DAs benefit from synergy; power of color in DeskDraw and DeskPaint is well-exploited.

− DeskWrite sluggish with large files; DeskCalc limited in features; some minor bugs.

By Dale Coleman

If you're familiar with Zedcor Inc.'s DeskPaint and DeskDraw desk accessories, you're already familiar with the concept of powerful, virtually no-compromise DAs that rival stand-alone applications. Drawing upon this design philosophy, the company recently has begun shipping the release version of Desk, a suite of seven DAs designed to work together as an integrated application environment.

The seven DAs include:

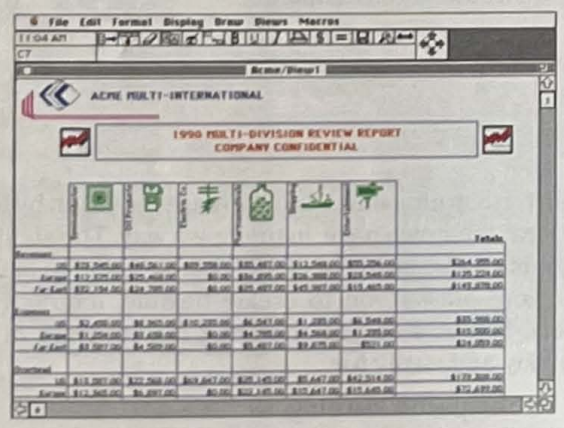
- DeskWrite for word processing.
- DeskCalc, a spreadsheet and charting program.
- DeskCom, for telecommunications.
- DeskFile, a database.
- DeskSecretary, an appointment reminder.
- DeskDraw, for object-oriented graphics.
- DeskPaint, for bit-mapped graphics.

Unlike entry-level products, such as Microsoft Works, Desk is aimed at the entire Mac market, from novice to sophisticate. Any or all of the DAs can be installed. (The installation program notices the presence of Suitcase or Master Juggler and proceeds accordingly.) Each DA saves either by default or by user selection in a file format common to popular standard applications.

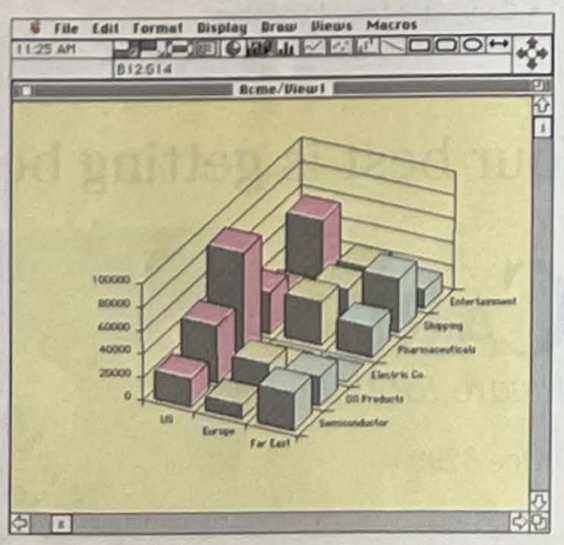
All Desk DAs except DeskSecretary support a number of common features, including optional pull-down menus (standard or reduced size) within the DA's window and on-line help.

DeskWrite is a general-purpose word processor suitable for small documents. While it is quite slow at reading large text files, performance is otherwise adequate. Notable features include a 100,000-word spelling checker, icons for next and previous page, eight-bit color control for text and background, and user preferences. Users dealing with text files from electronic services will appreciate a Change Case command that includes Uppercase, Lowercase, Opposite Case, Capitalize Sentences and Capitalize Words

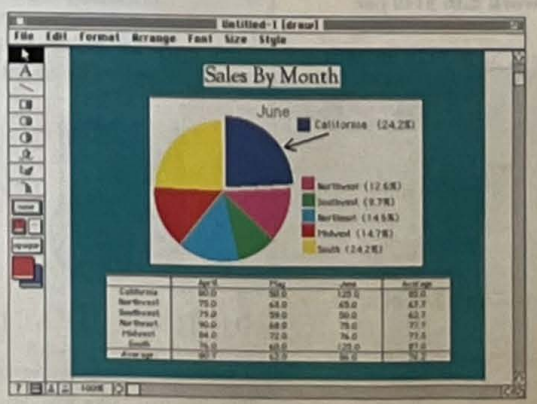
See Desk, Page 49



Full Impact spreadsheets can be dressed up with graphics. Some of the graphics here were drawn in Full Impact; others were imported.



This 3-D bar chart of revenues was rotated to reveal all data points. Full Impact charts are drawn directly on the spreadsheet. The 3-D charts are similar to their Wingz counterparts, but you can adjust views interactively.



By itself, DeskCalc (above) offers all the spreadsheet and charting functionality casual users may ever need.

DeskDraw (left) can be used to spiff up charts created with spreadsheet data in DeskCalc, as shown here.

Writing unlimited.

The freedom to write and think is for all of us. Now, there is a new word processor that's just right for us, too. It's called MacWrite® II, and it's made by Claris. MacWrite II makes it possible to share your ideas and thoughts with other computers and word processors. You'll be free to open documents from over 50 word processors, on all kinds of computers, with all kinds of speech, and work on them without reformatting.

But there's more you can do. (The feature is called XTND.) You can import graphics, not only from Macs, but many computers, guaranteed. And you can scale and crop them, one and all, in your MacWrite II document. In short, MacWrite II with XTND is a powerful word processor that lets you freely exchange text and graphics. You'll find also that your MacWrite II lets you change fonts, styles, sizes and colors, as well as text with its find/change feature. And you can create custom styles and save them as stationery — with all formats preset. You'll share your reports and letters quickly.

But what good is freedom of expression if you find your editing to be a hassle? That's why the page layout and editing is fully WYSIWYG: the thoughts you see are the thoughts you get. This WYSIWYG feature, by the way, is found only with MacWriteII. It's another way Claris simplifies word processing for you, whether you're 52, 22, or 72.

Called upon daily MacWrite II smooths your writing assignments and other chores. There's MacWrite II spell checking, for example, and foreign dictionary programs that are optional, and a host of other features that come standard. (Like a thesaurus, and a mail merge feature you'll discover saves lots of time.)

What it adds up to, you'll find, is a simple and powerful tool designed for people. All the people. It is for writers, and it is for business people. And it is for those of us in between. The freedom to write is liberating. Now technology is, too.

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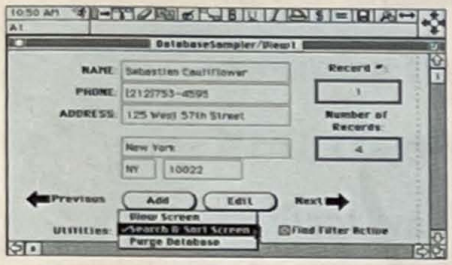

This Ashton-Tate Full Impact 2.0 data-entry screen is customized with macro boxes and on-screen buttons.

Full Impact

From Page 44

Buttons are created by drawing an object on your spreadsheet and linking it to a macro. Buttons in custom applications are powerful tools because you don't need to teach a Mac owner how to use them.

Function packs are collections of custom functions. Once installed, these are displayed in the Function menu for use with any spreadsheet. A function pack of 50 Excel functions comes with the program, and you can create your own.

In general, we found Full Talk to be more intuitive and easier to program than either Excel's or Wingz's macro language. The new capabilities make it even more powerful.

Performance on and off the computer. Full Impact 2.0 comes with thorough documentation, but the tutorial could be more interesting. Toll-call technical support is unlimited, and toll-free "high-

See Full Impact, Page 50

Counterpoint: Excel still the champ

In a championship boxing match, it is said that outboxing the champion is not enough; to win, you have to knock him out.

Wingz and Full Impact have added embellishments in their recent releases that are distinct improvements to the spreadsheet model established by Excel, but none of these provide the knockout punch needed to unseat Excel as the Macintosh standard.

Indeed, Excel's near-90 percent market share is the envy of Macintosh software vendors, and no challenger has been able to make much of a dent. That should tell you something.

Excel users are likely to remain content in the knowledge that the next release of Excel will bring them most, though probably not all, of the recent embellishments found in Full Impact and Wingz.

In fact, several of the features added to Full Impact 2.0, such as smart calculation and 3-D charts, are actually features that Excel or Wingz already had.

One of the features that is most frequently mentioned as an advantage to Full Impact and Wingz is the capability to include a chart as part of a spreadsheet.

It may be that this feature is a two-edged sword because it seems to prevent Full Impact and Wingz from offering split screens in their spreadsheets.

This feature, found only in Excel, allows users to divide any window into halves and quarters (they don't have to be even sections) and so select the beginning and end of rows or columns extending for even the entire size limit of a spreadsheet and instantly enter data or formulas in the entire range. It makes formatting a snap as well.

Excel wins the manual weigh-in but probably not the legibility contest. Microsoft's tech support is competent and available for the price of the phone call.

While Ashton-Tate has added similar service, its Support Services Guide implies that those who don't pay the annual fees for extended support will be consigned to a purgatory of "on hold" and apprentice tech-support personnel.

Full Impact's new low price will attract some casual users. For them, price may be as good a way to decide as any. In the hands of a casual user, there is little difference in performance between the three packages.

Many others, though, will choose the same spreadsheet that their bosses, fellow workers, peers, friends, neighbors or family members use. Even with file-format compatibility, no other spreadsheet can match the body of experience that surrounds Excel.

There is also a giant library of Excel templates out there that Full Impact and Wingz can't match.

Each of the three major spreadsheets will have its adherents who are willing to argue features indefinitely, but when the decision is announced, Excel is still champion and nothing in the foreseeable future is likely to cause the annual sales of Full Impact and Wingz combined to approach those of Excel.

— By Scott Beamer

Recording: Magneto Optical
Formatted Capacity: 454 MB
Media Size: 5.25 Inch
Read Rate: 675 KiloBytes/sec
Media Life: 10 Years Plus
Cleaning Kits: Head and Media
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Desk

From Page 44

options. Movable, scalable graphics are supported, and files can be saved in either DeskWrite, MacWrite 5.0 or text-only format. Unlike most Mac word processors, DeskWrite measures document size in the number of pages; maximum document size is limited to 40 pages.

DeskCalc is a simple but serviceable spreadsheet and graphics program. While it lacks the sophisticated presentations features and powerful macro languages of the big-name spreadsheets, DeskCalc should be adequate for casual users' needs. Nearly 50 functions are supported, including Date and Day. DeskCalc's charting capabilities, including seven-color support and eight standard chart types are also adequate. Any deficiencies in the capability to manipulate charts can be addressed by copying charts to the DeskDraw DA and enhancing them there. Document size is limited by available memory. Files are stored in SYLK format, ensuring file compatibility with commonly used spreadsheet applications.

DeskCom, the telecommunications DA, is similar to that found in Works, meaning it's nothing to write home about, unless you consider the barest minimum of features a virtue. Transfer rates up to 19,200 bps are supported. File transfer protocols are limited to plain text and MacBinary Xmodem. A Preferences command frees you from having to reset options each time you open the DA, and a simple Phone Book holds nine of your most frequently dialed numbers.

DeskFile is a nuts-and-bolts flat-file database that supports the traditional form and list views as well as simple searching and sorting. Options include automatic saves after a user-specified number of minutes and the creation of a backup file. In one of the best examples of Desk's integration, DeskFile forms design is handled in DeskDraw, permitting the creation of complex designs. While files are normally saved in a proprietary DeskFile format, the File Import and File Export commands support a tab-delimited text format that is accessible to all popular database applications. As with DeskCalc, document size is limited to available memory.

DeskSecretary is an appointment reminder system, similar in concept to Imagine Software's SmartAlarms, supporting user-specified "early-warning" notification of scheduled appointments. Features include optional printing of reminders and user control over most functions. When the reminder window appears, you can tell DeskSecretary to remind you again later at a time you specify, deactivate DeskSecretary for a period of time or simply acknowledge the reminder. DeskSecretary supports digitized sound for use with reminders. Three sounds are supplied by Zedcor; you can also add your own.

Both the DeskPaint and the DeskDraw DAs are new versions of the well-received DeskPaint and DeskDraw 2.0 package. (The DeskPaint and DeskDraw 3.0 package also is available, and the modules are identical to those in Desk.) Major improvements include an enhanced user interface and support for 32-bit color. All common paint and draw tools are available.

Both DeskPaint and DeskDraw are adept at reading and saving in a variety of popular file formats. DeskDraw can open and save files in PICT, PICT2 and its proprietary format. DeskPaint is capable of reading and writing files in MacPaint, TIFF, compressed TIFF, PICT and PICT2, in addition to its proprietary format. This "multilingual" file-handling capability makes both DAs handy tools, particularly for the occasional user.

If your Mac painting and drawing needs fall somewhere below the capabilities of Deneba Software Inc.'s Canvas or Electronic Arts' Studio/8, the DeskDraw and DeskPaint DAs should fulfill most of your needs.

Documentation and support. The documentation consists of an installation pamphlet, a tutorial and a reference volume. Each volume actually consists of discrete manuals, complete with an independent table of contents, index and page number sequence for each DA. An integrated table of contents and index for each volume would be a better solution.

Technical support is available via a toll call. The odds of getting one of the principal product developers when you call are excellent.

Known problems. The documentation states that the current version of the System software is recommended. Our experience is that System 6.0.5 is necessary to ensure that all features work reliably. Zedcor admits that there are a few minor bugs, although we were unable to duplicate them: Grouping and Ungrouping text in DeskDraw is not completely reliable, DeskWrite sometimes loses Preferences when the DA is run on 68000-based Macs and the DeskSecretary sound files fail under certain low-memory conditions.

Our own experience with DeskWrite was less positive. The Print Page to Clipboard com-

See Desk, next page

KODAK SV6510 Color Video Printer.

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Thermal Printing Systems from Kodak

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Desk

From previous page

mand, designed to create special text effects with DeskDraw, puts a PICT image of the page on the Clipboard. Pasting the DeskDraw-modified text back to the document produced erratic results. One of the DeskWrite tutorial documents would display with several rows of pixels missing from two lines of text.

To its credit, the company already is working on an upgrade that will be distributed free to registered users. In view of Zedcor's commitment to customer satisfaction, as evidenced by an unconditional 60-day money-back guarantee, the known problems with the current version shouldn't affect a purchase decision.

Conclusions. Any product integrating the basic applications on the Mac will inevitably be compared with Microsoft Works. Desk stands up to the comparison well. DeskWrite offers several useful features not available in Works, although the Works word processor can deal with larger files. Works' object-oriented drawing tools pale compared with the power of DeskDraw and DeskPaint.

DeskFile, DeskCalc and DeskCom are roughly equivalent to the corresponding Works modules, but the availability of powerful, 32-bit color object-oriented graphics manipulation for word processing, charting and forms-design tasks makes Desk a much more powerful tool. An added Desk advantage is the freedom to load just the DAs you need to accomplish a task rather than a large application.

Desk delivers on the concept of integrated software. Entry-level users will find all they need to get started. Many task-oriented power users will find all the occasional functionality they need to complement their primary applications. When System 7.0 (which essentially makes no distinction between applications and DAs) arrives, the utility of the flexible Desk modular approach to integration will be even more apparent.

Zedcor Inc. is located at 4500 E. Speedway, Suite 22, Tucson, Ariz. 85712; (602)-881-8101. □

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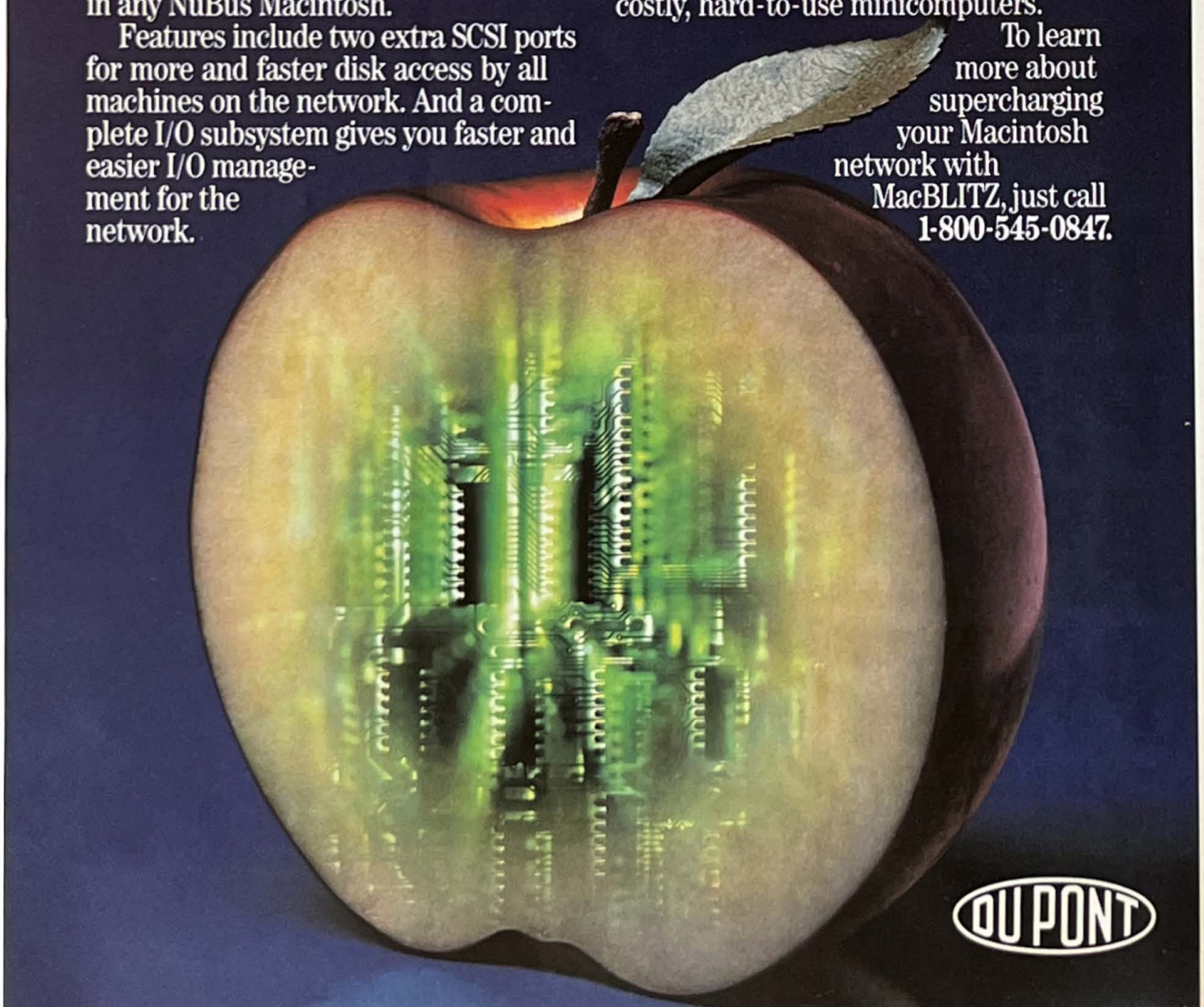

Full Impact

From Page 48

priority" support costs $150 to $595 a year.

The low-priority staff we spoke with were courteous but unable to answer our questions. The high-priority staff gave us some tips on virtual memory but could only venture a guess at the problems we posed.

As for virtual memory, it is one of Full Impact's real advantages, but it comes at a price. Full Impact uses space on your hard disk to store information so that you can load and work on several enormous spreadsheets that are too big for Excel.

But even with plenty of space on the disk drive running Full Impact, we had trouble opening and saving documents. Full Impact handled the problem poorly, giving either no alert messages or terse, unhelpful ones. It turns out that our documents were on a second, nearly full drive; virtual memory needs at least 2 Mbytes of free space on the document drive to work efficiently. With enough RAM and disk space, virtual memory works well. It's transparent and fast.

Full Impact 2.0's intelligent recalculation algorithm improves performance by calculating only the cells affected by a change. In our recalculation benchmark tests (see chart, Page 44), Full Impact bested Excel in three cases and was slower in one. We'd give Full Impact a slight edge over Excel in overall performance, with Wingz remaining the champ.

Conclusions. Full Impact has its problems. It supports only eight colors, and Full Impact documents, though much smaller than before, are still large. A full one-page spreadsheet uses about 50 Kbytes. While there is a Page Layout window for setting margins, headers and footers, there is still no way to preview the entire printed page.

Excel has some features that Full Impact is missing, such as programmable dialog boxes, but its limitations and eccentricities outweigh Full Impact's. Full Impact is easier to use than Excel, and you can create a better-looking spreadsheet in less time. It's more convenient to have the charts on the spreadsheet rather than in separate windows, and the drawing tools are useful for adding annotations and highlights. In addition, Full Impact can have multiple databases in a single document, which Excel cannot.

On the other hand, Wingz has many of the same advantages as Full Impact, such as integrated spreadsheet and graphics, with even more features that can be customized. It also has more charting features and full color support. But you can't export in Excel format.

Full Impact, Excel and Wingz are all competitive, but Full Impact is the easiest to use. Most importantly, there is no Excel feature we miss when using Full Impact. With the compatibility issue virtually nullified, we expect many users to make the switch.

Ashton-Tate Corp. is located at 20101 Hamilton Ave., Torrance, Calif. 90509-9972; (213) 329-8000. □

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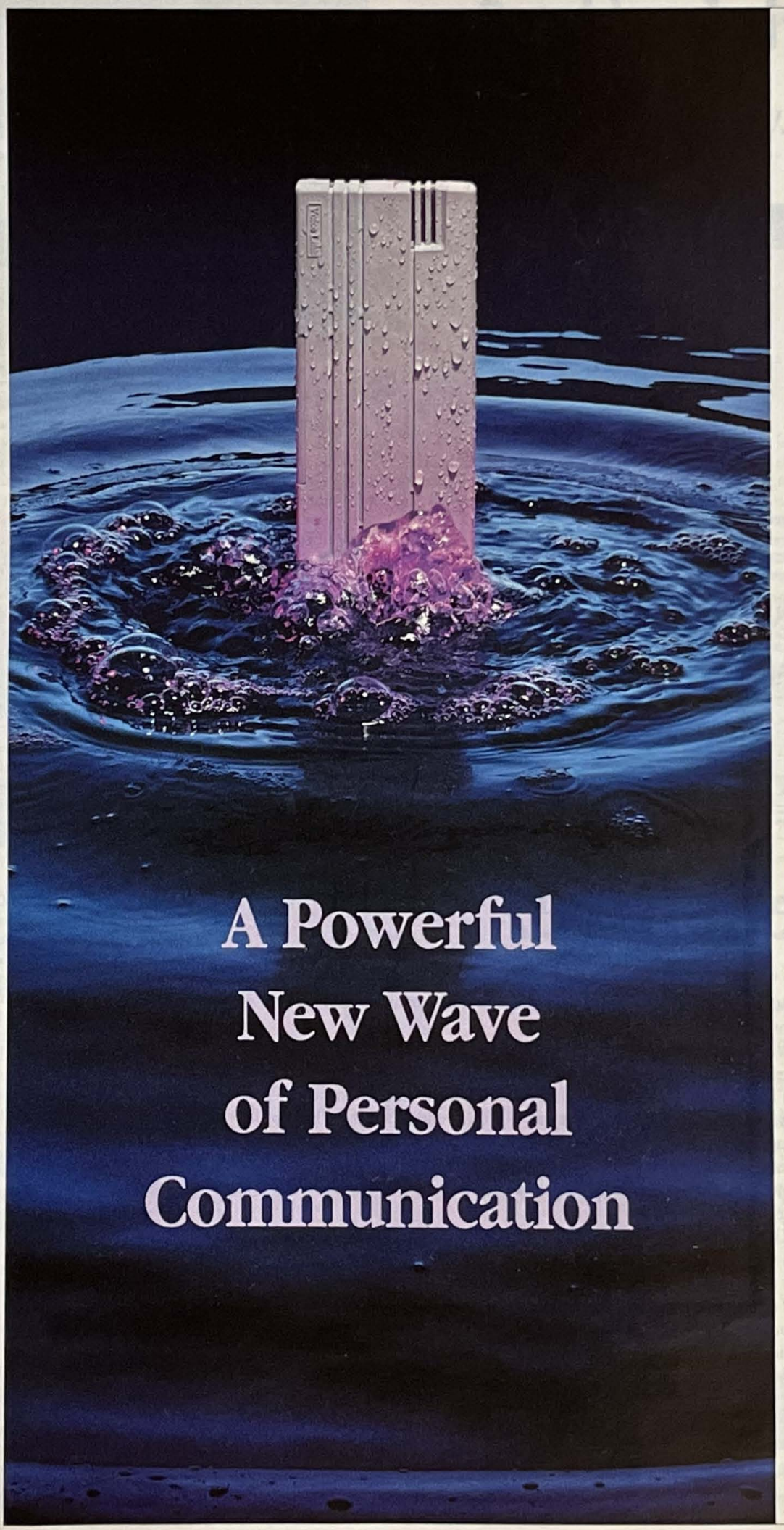
Industry Adopts Voice Input

Apple Computer's new release of System Software includes MACE (Macintosh Audio Compression Expansion). This addition to System Software allows every Macintosh to output 8 bit sound that has been compressed at a ratio of 6:1, 3:1 or 1:1. Compression is important because recorded sound contains a significant amount of data and can consume a considerable amount of memory unless it is compressed. Only one sound input device for the Macintosh has a Digital Signal Processor embedded with MACE. The product is Voice Link. Voice Link is a new technology for the Macintosh that integrates voice and sound with mainstream applications. The list price is $269.

During the last year Apple Computer has heavily promoted the integration of sound on the Macintosh. As a result, future releases of Macintosh applications will have integrated recording facilities. The integration of voice and sound will become as common to the Macintosh interface as text and graphics. Voice annotation within word processing, data base and spread sheet applications, or voice messaging with electronic mail applications will become a standard function of your Macintosh.

Voice Link from Articulate Systems is incredibly fast and releases the Macintosh CPU from the burden of compression routines. Articulate Systems was awarded the 1989 Mac User EDDY for the Most Significant Hardware Product of the Year for the Voice Navigator™, their voice recognition product. Voice Link represents Articulate Systems' most recent product announcement and is currently available through computer retail stores. ■



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Voice Link is an asynchronous, interrupt-driven device. You can record while your Macintosh continues to work on other operations, giving you the best audio quality without taking up alot of memory or burdening your Macintosh with compression routines.

Voice Link comes complete with sound editing software, voice messaging software and lots of other tools to let you integrate sound. Voice Link gives you compressed audio files with unsurpassed fidelity.

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REVIEWS

New leader in fax/data?

Low-priced DoveFAX has initial problems

DoveFAX Desktop

Dove Computer Corp.
List price: $399

+ Excellent image quality on graphics; good value.

− Some incompatibilities; slow printing.

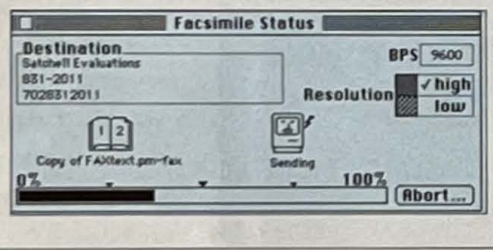
By Stephen Satchell

Dove Computer Corp. has a potential market leader for fax/data modems in its low-cost DoveFAX Desktop, a 2,400-bps data modem with full 9,600-bps Group 3 facsimile capabilities. The good news is the price: $399. The bad news is that the first release of the software has bugs and only preliminary documentation.

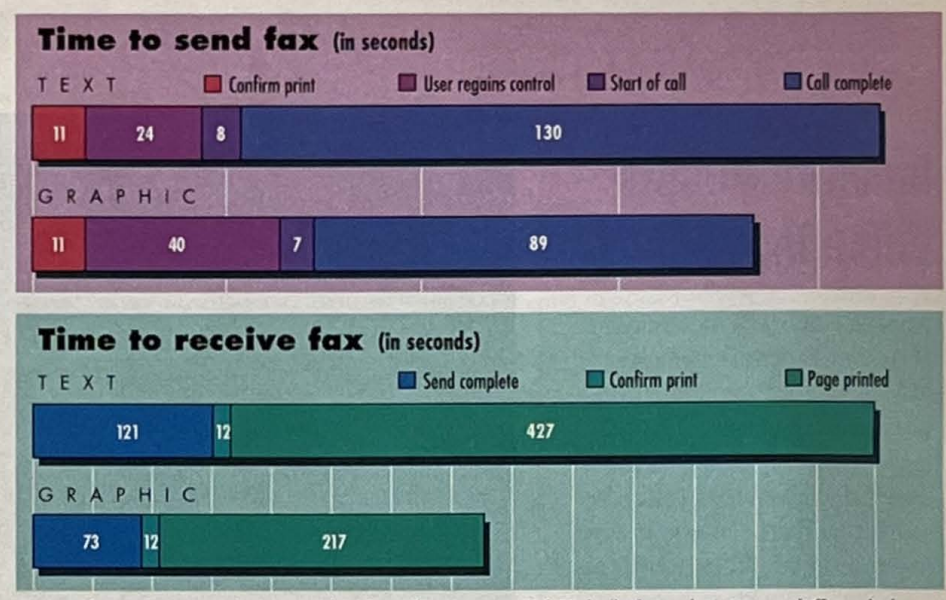
We looked at several of these two-for-one fax/data modems (see MacWEEK, April 3), and the $599 OrchidFax from Orchid Technology Inc. of Fremont, Calif., was the previous send-and-receive price leader. (The send-only ProModem 2400MFAX from Prometheus Products Inc. of Tigard, Ore., was a good deal, too, at $299.)

Fax features. The DoveFAX supports asynchronous data communications at 300, 1,200 and 2,400 bps and uses the industry-standard AT command set. It transmits and receives Group 3 fax documents at 2,400, 4,800, 7,200 and 9,600 bps. The data portion doesn't offer error control, but Dove plans to make it available. Voice-mail functions will be available in September as a $249 software upgrade, according to the company.

Dove's fax software, developed by STF Technologies Inc. of Concordia, Mo., handles the preparation, sending and receiving of faxes. You can send faxes from within any application by printing to a special Chooser document, or you can use the supplied desk accessory to fax a short text message. The software includes an electronic address book that can hold an unlimited-length list of fax numbers. The software can send a fax to a group of addressees, delay sending a group (but not individual faxes in a group) until a specific date and time, and generate cover pages automatically. You can view incoming faxes on-screen and preview faxes waiting to be sent.



DoveFAX Desktop's software is easily used from within almost any application. The progress window shows the status of the fax being sent.



Faxes sent from modem connected to Mac II with 5 Mbytes of RAM, running MultiFinder (background printing turned off), standard set of INITs, without ATM. Faxes received from a Toshiba T3700 facsimile machine over local telephone lines and printed to Apple LaserWriter IINT. Tests were performed several times and results averaged.

For data telecommunications, Dove bundles Quick Link II from Smith Micro Software Inc. of Huntington Beach, Calif., which is a reasonably complete VT100 terminal emulator with a scripting language.

Looking good. We had no trouble using the DoveFAX as a basic data modem and successfully connected to a variety of services and to other modems.

We did have trouble receiving faxes from a Toshiba T3700 fax machine when the DoveFAX was connected to a Mac II. On an SE/30, though, it worked perfectly. Problems connecting with specific machines are a fact of fax life. Problems involving different models of Macintosh computers, however, point to more serious trouble.

We ran our tests using a Mac SE/30 (see table, above) using Best (Fine) transmission mode. The fax send time was on par with others we've seen. The time taken to receive faxes was also average, but the software took a surprising nine minutes to print two pages of faxed text and just under five minutes to spit out the test graphic on a LaserWriter IINT. The preview feature is an asset here: You can look at a document and decide if it is worth printing.

When sent from the DoveFAX, our text document (set in 12-point Courier) showed a lot of jaggies and unevenness in the characters printed. This wasn't unexpected, because Dove doesn't include any large-scale fonts with its package. Results were much better when we installed triple-size screen fonts. Dove includes a brochure (but no software) for Adobe Type Manager, which can create the large fonts necessary for good-quality faxes from PostScript outlines. The DoveFAX's excellent output of our graphics document, a 300-by-300-dpi TIFF image, showed very clean diagonal lines, clear background strokes and only minor blurring of white-on-black details.

Documentation, take one. There isn't much to say about the preliminary documentation. What you get takes you through the relatively simple installation procedure and does a good job of walking you through the software's functions. The troubleshooting section covered common installation errors, but it explained none of the runtime error codes we encountered. Dove includes a card you mail back to receive the final documentation when it is ready.

The DoveFAX is a new product, and Dove's technical-support department is still learning what it takes to handle the thousands of different fax machines and modems in use. Our attempts to get answers to our problems with the Toshiba T3700 showed us that Dove has made a promising start.

Conclusions. The problems we encountered with the DoveFAX have been traced to timing errors, and Dove is preparing Version 1.1 of its software to correct them; it should be available in September. When it works, the DoveFAX is nice to use and provides excellent-quality images if you use ATM or supply your own large fonts. When the problems are fixed, the DoveFAX will be less expensive and easier to use than its competition. It is worth looking into.

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Help Desk

We only have to break some fingers

Recently, while typing in MacWrite, I noticed that the word "Outline" in the Style menu wasn't displayed as an outline, although the word was still there. I don't use that style, but I'm curious. What's going on?

You've described a symptom of infection by the WDEF virus. The loss of the Outline font style is just a side effect, caused by what appears to be a bug in the virus code. Fortunately, WDEF is easy to kill: Rebuild your Desktop file (where the virus "lives") by holding down the Command and Option keys when you start up. (Warning: This will erase all comments you have typed in the Get Info window of any file.) You'll most likely be reinfected quickly, though, so you'll want to fortify your system with an anti-virus utility.

Because, like most Mac viruses, WDEF is benign (it appears to be simply a programming exercise, as opposed to a deliberately destructive program), I think breaking the fingers of the programmer responsible should be sufficient.

BY DAVID RAMSEY

Younger drivers are faster. In my last column, I recommended LaserWriter drivers 6.0 and 6.0.1 only for those printing in color. Reader Robert Hammen tells me that these drivers have some significant advantages for others as well. Users with disk drives for font storage attached to their printers will see much better performance with versions 6.0 and 6.0.1 than with 5.2. There are also other performance improvements and some minor bug fixes (the Unlimited Downloadable Fonts in a Document option doesn't work in Version 5.2 but does in 6.0 and 6.0.1).

The littlest debugger. Richard Howland-Bolton, the manager of publications computing at Cornell University, notes that you don't need the Macsbug debugger to recover from many crashes. In the cases when Macsbug's "ES" command would work, you generally can use the Mac's built-in minidebugger, which is invoked by pressing one of the buttons on the programmer's switch. The minidebugger displays a box in the middle of the screen with a cryptic > prompt. To recover from a crash, type "SM 0 A9F4" followed by a Return and then "G 0" and a Return. This arcane sequence places an Exit to Shell instruction at location zero in the Mac's memory and then executes it, which is pretty much what typing "ES" in Macsbug does.

The programmer's switch is a piece of plastic that comes with each Mac, but you must install it yourself. (The Portable has its switch built in.) The switch has two buttons: Pressing one reboots the Mac; pressing the other invokes the current debugger. If no other debugger is loaded, the built-in minidebugger is used. Many non-technical users discard their switches, but they're available from any Apple dealer.

You can use the reboot button on the programmer's switch if restarting is your only option. Rebooting via the switch is preferable to turning the machine off and then on with the power switch.

Backup again. Larry Zulch of Dantz Development Corp., the maker of the backup programs DiskFit and Retrospect, had this to say about a recent column: "I thought that your suggestion to back up, reformat and restore to fix tenacious low-level problems made a lot of sense. However, I think it is important to emphasize the need for *two* backups before intentionally erasing a hard disk. Without two backups, information is stored solely on a medium — floppy disks — that is less reliable overall than hard disks."

This is a good point. People shouldn't get lazy about backups, even with the introduction of new disk- and file-recovery tools, such as Central Point Software Inc.'s MacTools Deluxe and Peter Norton Computing Inc.'s Norton Utilities for the Mac. Current backups of your data are the first line of defense against disk disasters. □

Please send questions to David Ramsey on CompuServe: 76702,335 or to Help Desk, c/o MacWEEK, 301 Howard St., 15th Floor, San Francisco, Calif. 94105.

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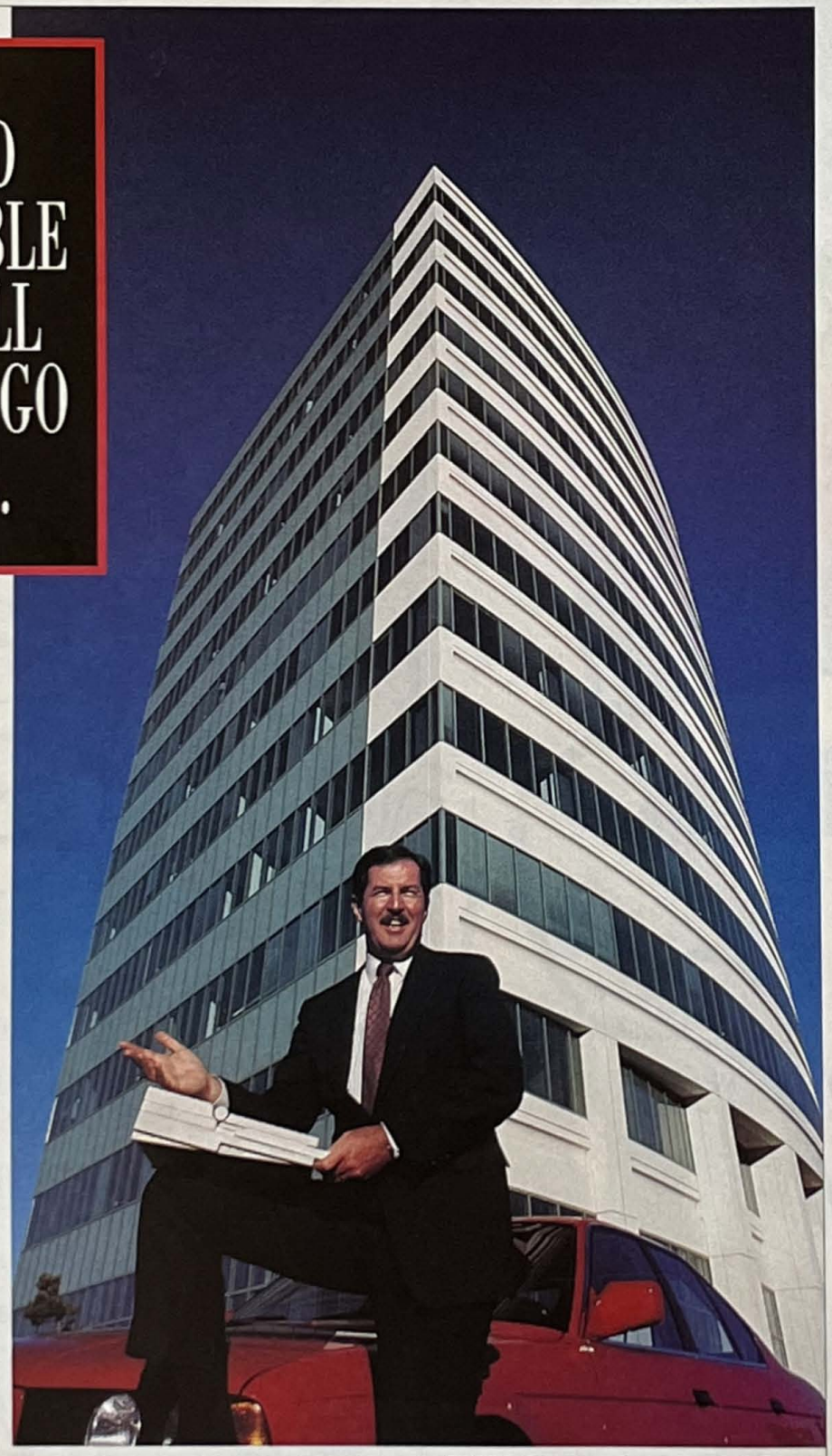

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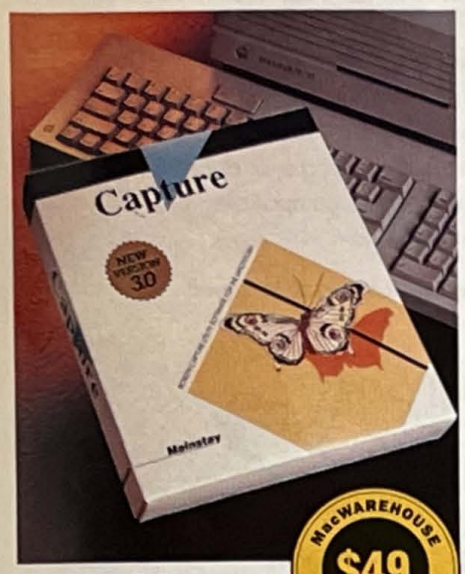

Capture 3.0

(Mainstay) Snapshot portions of any Macintosh screen with Capture, a powerful screen-capture utility from Mainstay. Use it to capture pulled-down menus or dialog boxes-even the cursor. Save snapshots as full color PICT files or automatically copy them to the Clipboard. You can even proportionally resize your image for compact storage. Little or no image clean up is necessary. Compatible with MultiFinder as well as all display types and sizes. **Fax*FACTS* #3753.**

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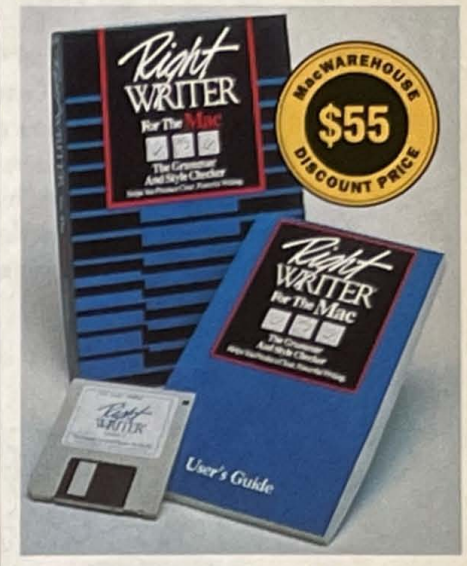

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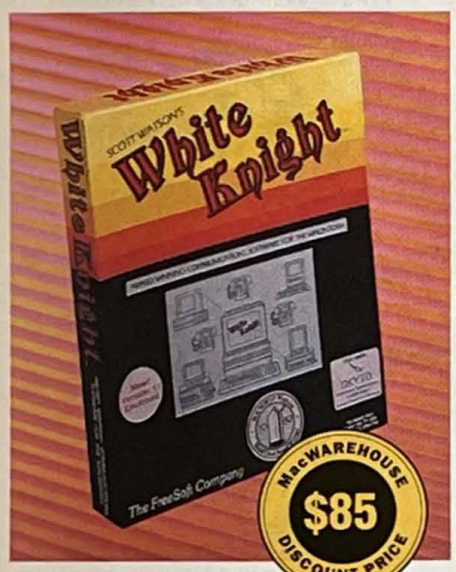

White Knight 11.0

(FreeSoft) White Knight is an almost total rewrite of the old favorite, Red Ryder. The "new features" list alone is 20 pages long. Some of the most important new features include a reworked user interface with completely reorganized menus and enhanced terminal support including support for the VT-102. White Knight supports the new ZModem protocol, as well as more versions of XModem and Kermit. It works properly with MultiFinder and supports both color QuickDraw and large monitors. FreeSoft provides a *free* subscription to GEnie and a *free* copy of Okyto (a revolutionary Mac-to-Mac file transfer program) with each copy of White Knight. **Fax*FACTS* #1778.**

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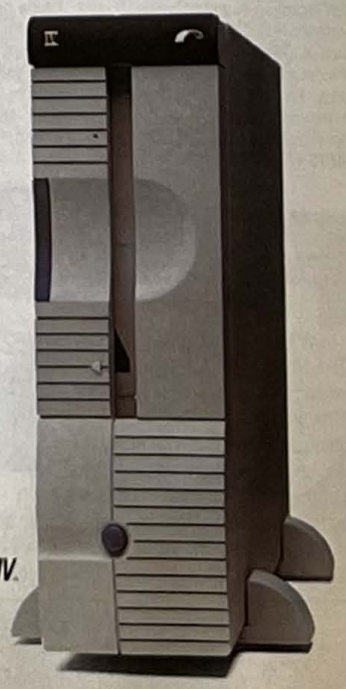

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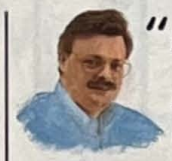

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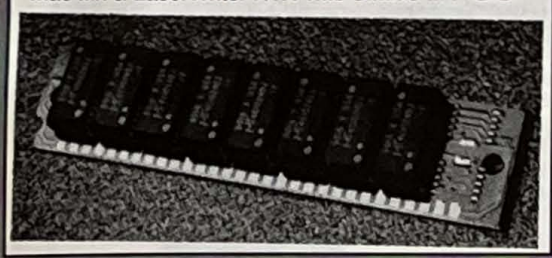

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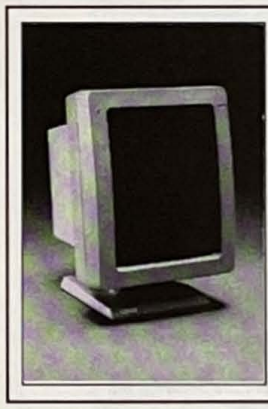

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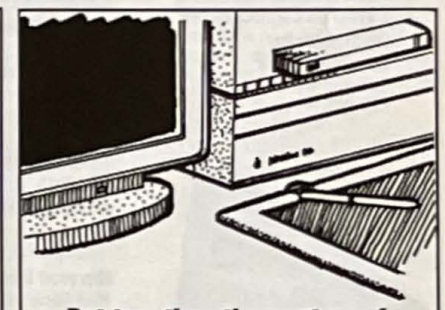

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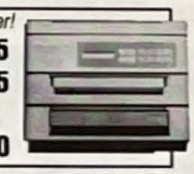

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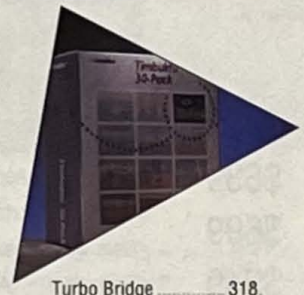

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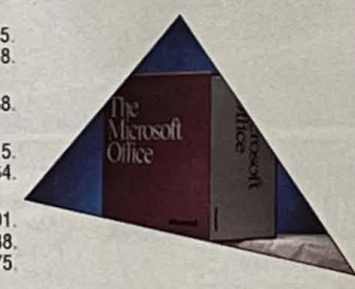

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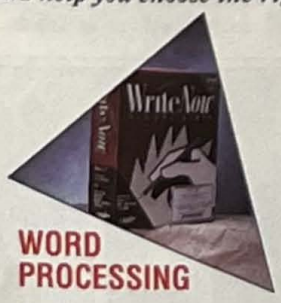

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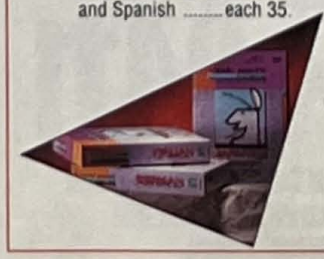

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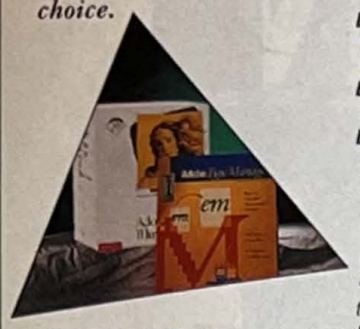

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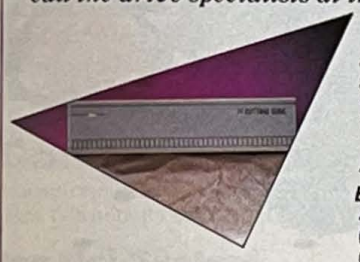

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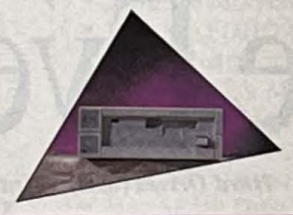

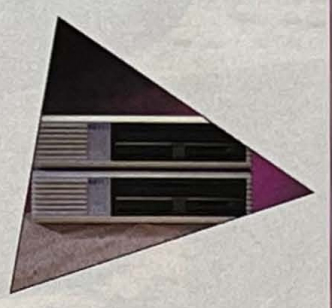

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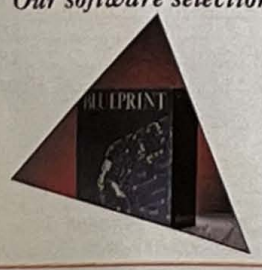

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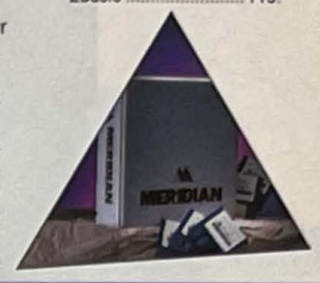

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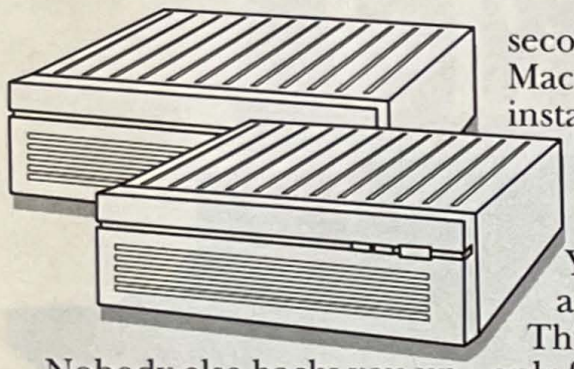

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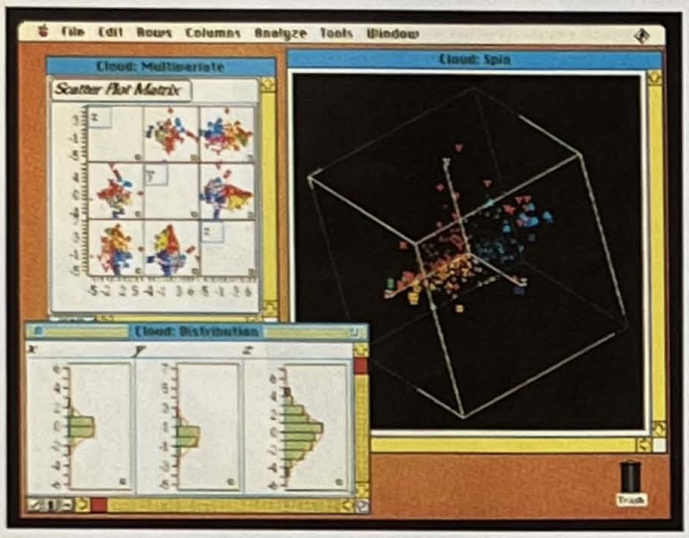

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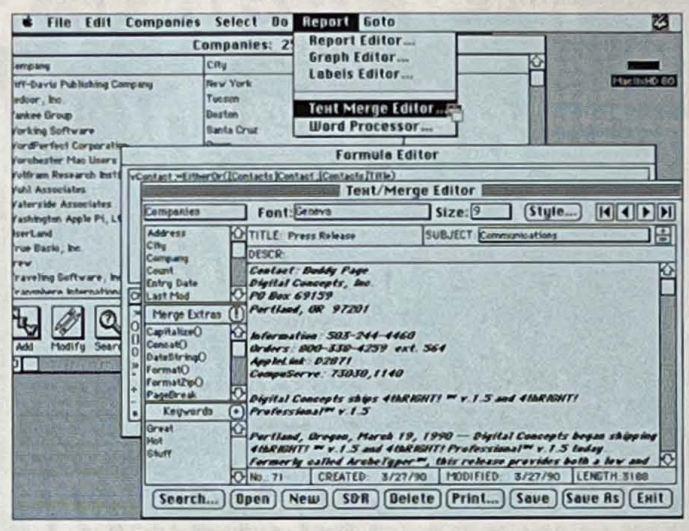

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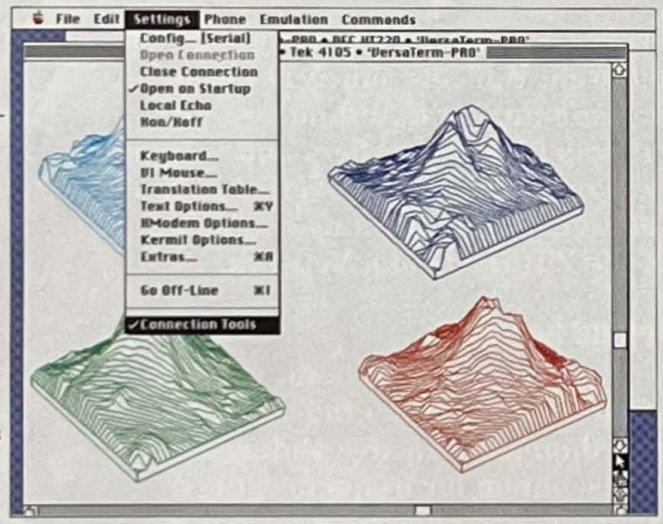

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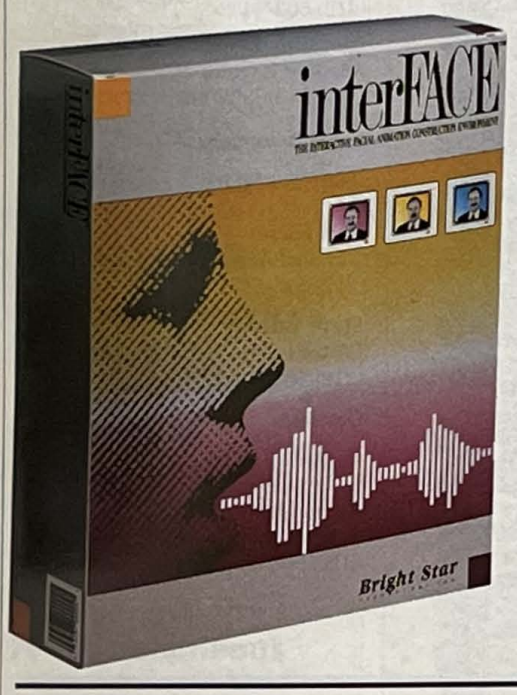

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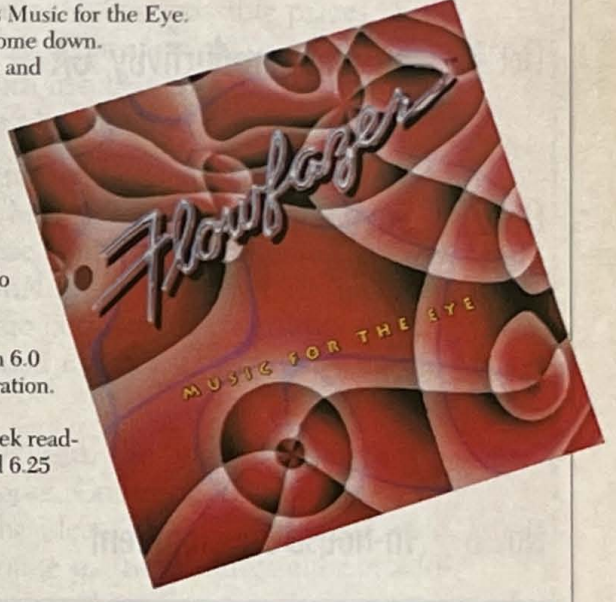

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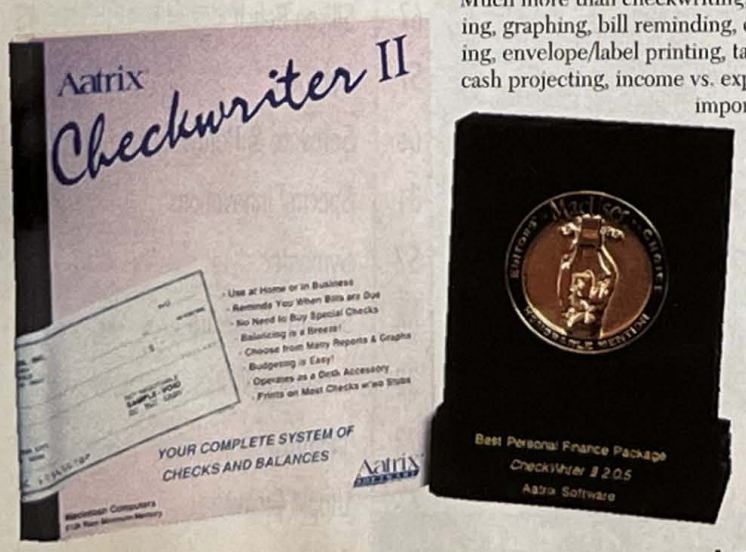

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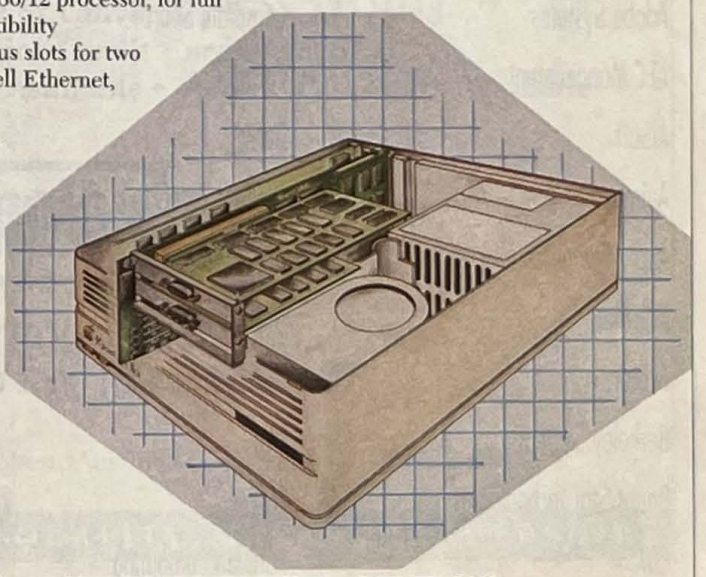

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Oct 23	Save	Oct 12
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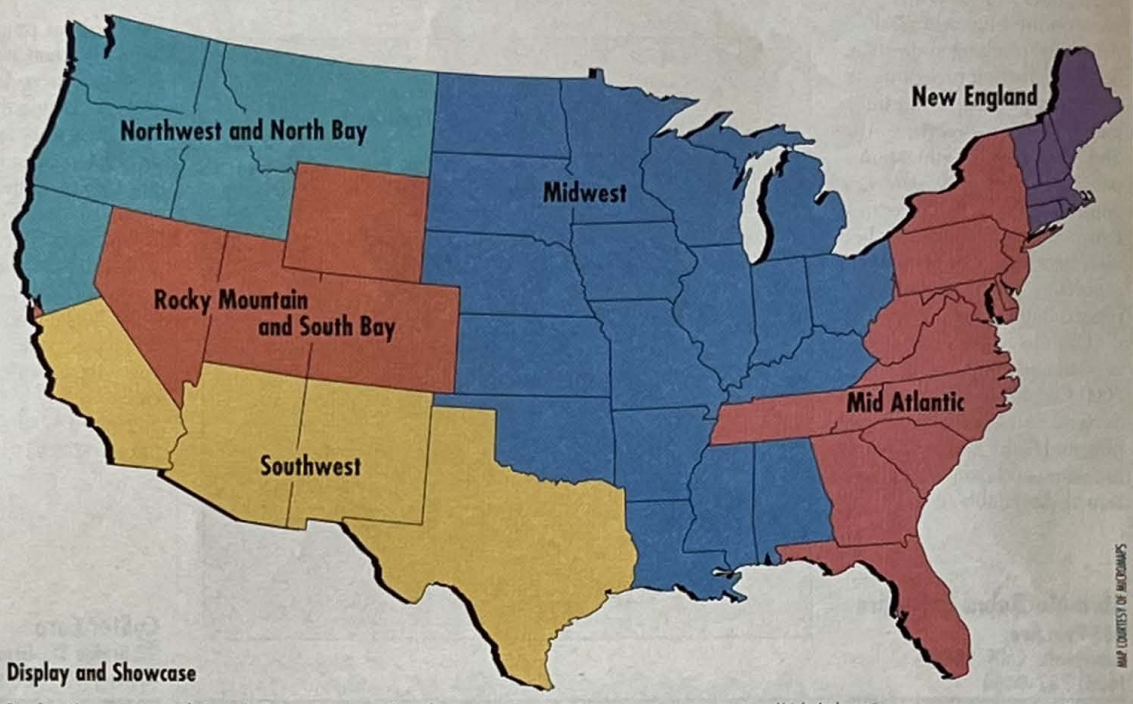

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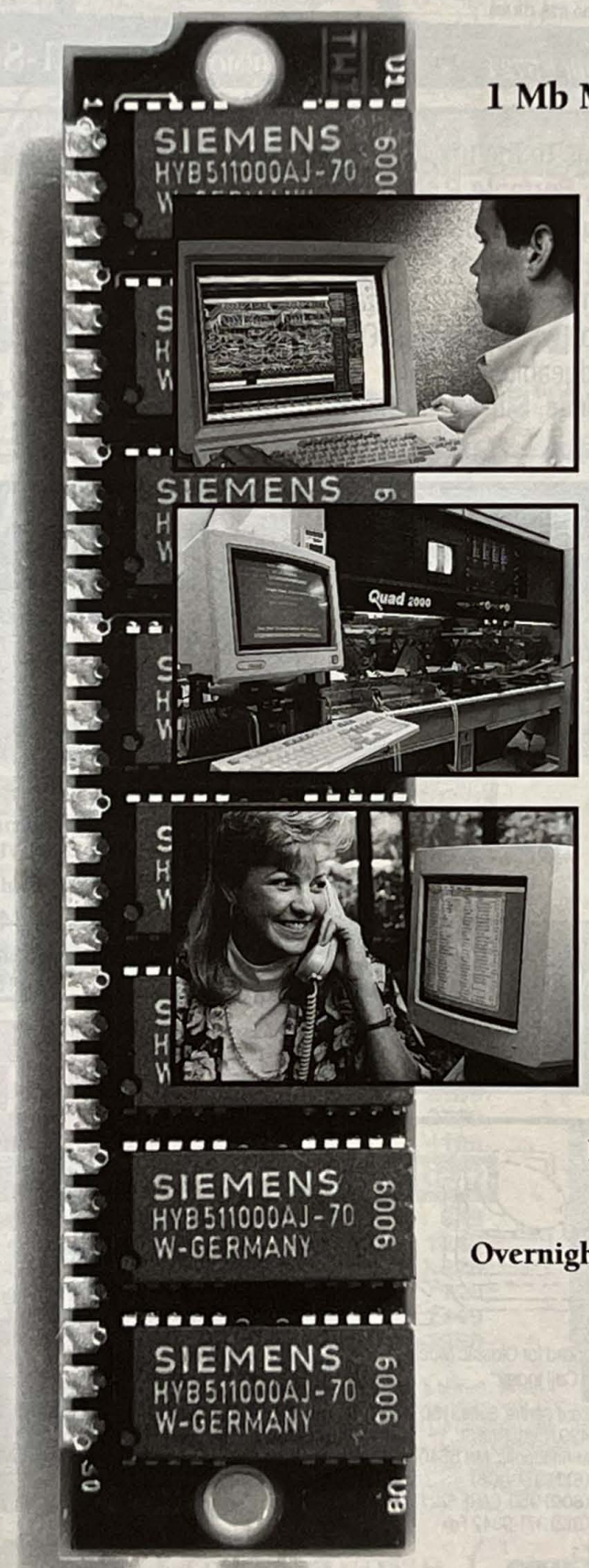

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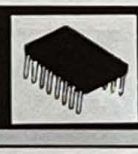

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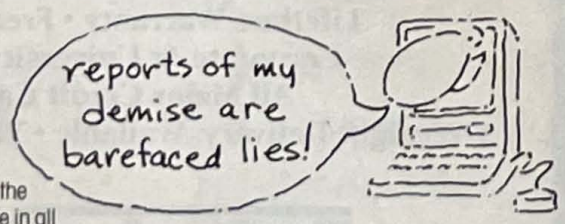

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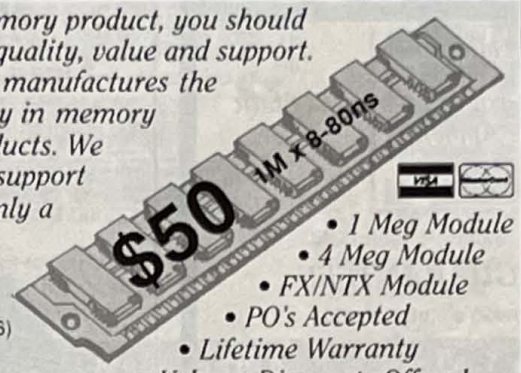

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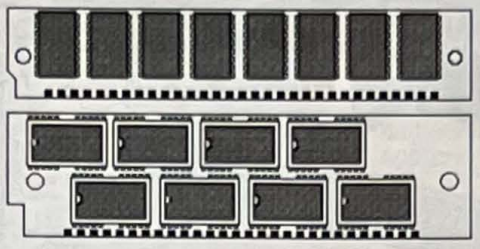

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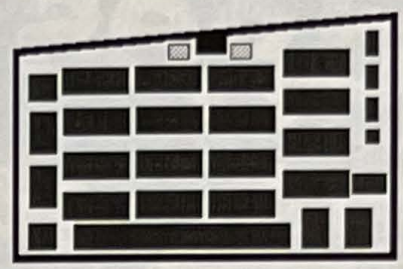

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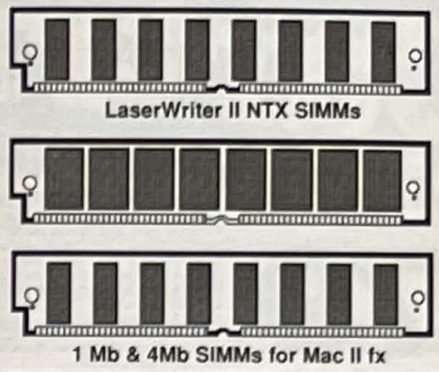

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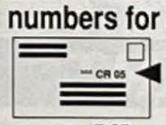

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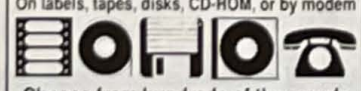

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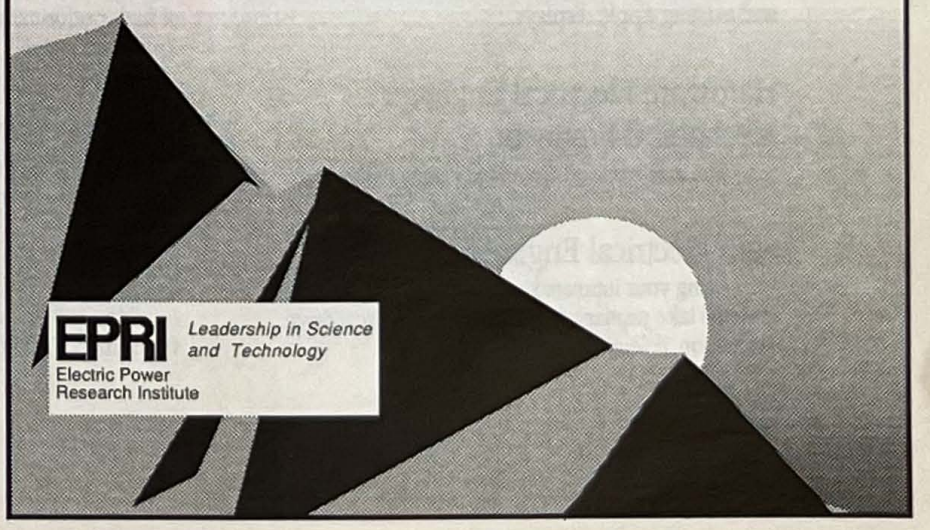

Inside Apple

August 3. *Things are moving faster than ever, but around here that's just business as usual. Which is why we always need the very best people to push us further into new products and peripherals, new software and information systems. Sound interesting? Then read further. And discover how you can make the difference inside Apple.*

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PRODUCT DESIGN & IMAGING

Reliability Engineer

You will work closely with product development groups to ensure the reliability and total functionality of new Apple products.

Hardware Test Engineers

Mass Storage, Flat Panel, Display Technology

You will develop new and sustaining test plans; schedule, allocate resources and monitor test activities.

Product Design Engineers/ Project Leaders

Take full responsibility for the detail mechanical design of our new CPU and Peripheral product.

Printer Software Manager
Printer Software Engineer

You will be developing printer graphics software.

Display Technologist

You will play a major role in setting Apple's future direction in display technology by performing industry surveys, vendor interface, prototype construction and evaluation.

Video Display Engineer

You will work with vendors and various Apple groups to specify, design and develop state-of-the-art display systems for high volume production of both new and existing Apple displays.

Hardware Electrical Engineer
Mechanical Engineer

You will work on advanced floppy disks.

Staff Electrical Engineer

Using your intimate knowledge of drive internals, you will take primary responsibility for optical drive evaluation, selection and debug.

Software Engineer

You will work with Macintosh® device drivers and mass storage devices.

Scanner Project Leader

You will help determine Apple's scanning strategy and be involved with image processing from a hardware and software perspective.

For all Product Design & Imaging positions, please respond to Dept. MB801MW.

VIDEO/GRAPHICS & VOICE/SPEECH

CPU Project Leader/Manager

You will lead a team of engineers developing a new high-performance system.

Digital Architect

You will provide architectural and implementation leadership of large aggressive digital systems.

Text to Speech/Software Engineer

You will port/optimize text to speech software to new processor environment.

Voice Recognition Software Engineer

You will port/optimize speech recognition software and investigate and implement improvements.

Sr. Digital Design Engineer

You will participate in the design prototype, implementation, manufacturing support and shipping of high-performance frame buffer add-in cards for Apple products.

Sr. Video Hardware/ASIC Engineer

You will be the lead designer for an ASIC video compression system.

Simulation Tools/Verification Guru

You will develop and run simulations for design verification of multichip video compression systems.

Video Compression Software Engineer

You will develop algorithms for video compression and decompression.

Sr. Video Engineer

You will be involved with system through component level design of digital and analog video circuitry for multiple color standards such as NTSC, PAL, SECAM, HDTV and components.

Sr. Video Compression Architect

You will perform architectural design of highly integrated video/audio compression/decompression products.

Video Software Engineer

You will design and implement driver and utility level software for video cards.

Software Engineer

You will design, provide prototype software, and bring up video compression/decompression boards.

Graphics Software Engineer

You will contribute to our 3D product.

Manager of CPU Diagnostics

You will lead the architecting and development of engineering, manufacturing and service diagnostics.

Quality/Reliability Engineer

You will establish reliability goals and drive quality and reliability issues for Apple and its vendors.

For all Video/Graphics & Voice/Speech positions, please respond to Dept. GP802MW.

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You will design networks for long distance communications for both U.S. and overseas Apple sites.

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Programmer Analysts
Business Analysts

You will design and develop new business applications on IBM S/370-3090, S/38, AS400, DEC VAX, Tandem, and Macintosh platforms. You will be using MVS, S/370 Comm, CICS, DB2, IDMS, Cobol, Scobol, NOMAD, VMS, RDB, and/or 4-D.

For all IS&T positions, please respond to Dept. DR804MW.

Send your resume, indicating the appropriate department, to Apple Computer, Inc., 20525 Mariani Ave., MS 39A, Cupertino, CA 95014. Principals only, no phone calls, please.

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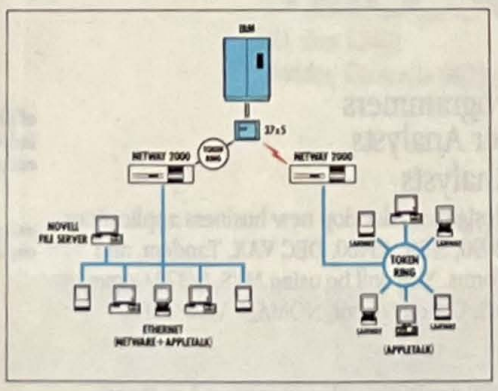

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Aldus announces new organization for third parties

By Carolyn Said and Henry Norr

Seattle — Aldus Corp. last week announced a new organization for third-party companies offering products and services that complement Aldus products, as well as a new support program for the service bureaus that many users turn to for final output from those products.

▸ The Aldus Developers Association promises hardware and software developers and service com-

See Aldus, Page 88

Mac monitor makers discuss VDT emissions

By John Webster

San Jose, Calif. — Macintosh monitor makers converged here late last month to discuss VDT safety. To their surprise, they drew a crowd of reporters clamoring for answers.

While the group did not reach specific solutions for lowering extremely low frequency (ELF) emissions from computer displays, it did agree that the issue warrants more attention.

Forum participants included Apple, SuperMac Technology, Raster-Ops Corp., Radius Inc., Sigma Designs Inc., E-Machines Inc., Digital Equipment Corp., Sun Microsystems Inc., Silicon Graphics Inc., Megagraphics Corp. and Toshiba America Corp.

Participants concluded that lowering ELF emissions would require them to draft color CRT specifications to present to Japanese manufacturers, primarily Sony Corp. and Hitachi Ltd., which supply the lion's share of Macintosh color monitor tubes to U.S. vendors.

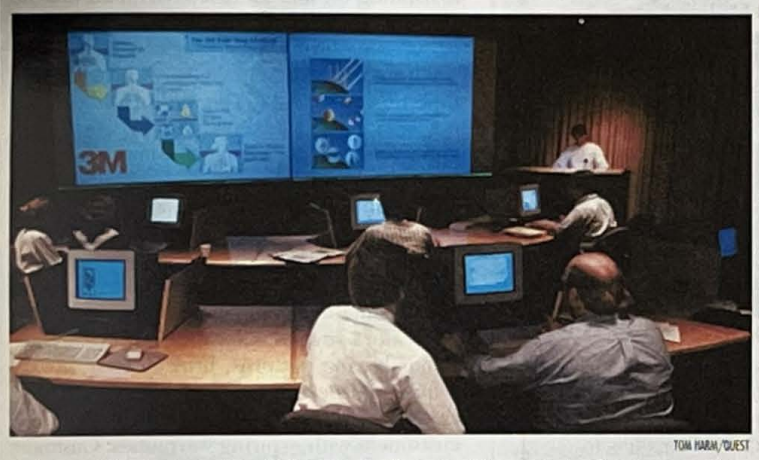
"Everyone buys color tubes from the Japanese, and we exchanged information on a specification they can [follow]," said Charlie Waters, director of marketing at Sigma of Fremont, Calif.

Waters also said the monitor makers would "fully support and help speed up" research being conducted by the Computer and Business Equipment Manufacturers Association, the American Electronics Association and the Electronics Industries Association.

Several participants in the dis-

See Monitor forum, next page

Authorware grows by helping companies boost productivity



TOM HARAN/QUEST

Authorware's interactive multimedia learning facility at its Minneapolis headquarters provides a high-tech environment for customer training and client presentations.

INDUSTRY PROFILE

By Daniel Farber

Minneapolis — Revenue per employee may be a colorless statistic, but it has become a key economic indicator of success for corporations, universities and government agencies.

To improve that all-important ratio of employee productivity to head count, many companies are investing in computer-based training and on-line reference materials.

Authorware Inc., based here, has been cashing in on the corporate push for desktop-computer-based training. The company's multimedia authoring system, Authorware Professional 1.5.3., is being used by McDonald's Corp., Citibank, Allstate Insurance Co., the French army, IDS/American Express, Northern Telecom Inc. and Steel Case Inc., among others (see story, Page 88).

Companies that have high employee turnover, complex systems or product lines, and stringent standards for safety are prime candidates for Authorware's product, according

See Authorware, Page 88

Congress hears Apple on ELF

By John Webster

Washington — Apple urged the government to play a greater role in setting standards when it testified before Congress last month on reported health effects from extremely low frequency (ELF) monitor emissions.

The occasion was a hearing on House Bill HR4801, which calls for increased funds to explore connections between prolonged exposure to VDTs and abnormally high numbers of miscarriages, cancer and other medical problems.

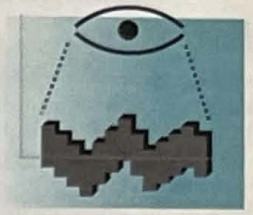
At the hearing, David Nagel, Apple vice president of advanced technology, said that "more attention should be given to the issue" and

See Congress, next page

Programmers picket Lotus

The League for Programming Freedom, which promotes free distribution of software code and information, recently conducted its annual protest in front of Lotus Development Corp.'s Cambridge, Mass., headquarters.

The league, which held its first protest last year, targeted Lotus as a symbol of the trend among software vendors to use litigation as a means of stifling competition from new developers offering similar products.



Business BRIEFS

Businessland losses shock investors; stock plunges

San Jose, Calif. — Already reeling from two consecutive quarterly losses, Businessland Inc. shook Wall Street last week when it reported staggering losses for the fourth quarter and for fiscal 1990.

In the aftermath, Businessland's stock plummeted $4, to $2.89 on Aug. 6, a decline of nearly 60 percent.

For the quarter ended June 30, the computer-retail giant reported a net loss of $21.5 million, including a one-time $6 million restructuring fee, or 73 cents per share, on revenues of $339 million. For 1990, Businessland lost $23 million, or 76 cents per share, on revenues of $1.35 billion.

The company also said that, as a result of "accounting errors," it would have to adjust its reported losses for the second quarter, from $1.2 million to $2.1 million, and for the third quarter, from $1.7 million to $3.6 million. To make matters worse, it said the losses put it in violation of terms on $50 million in loans.

"We are taking a critical look at our business and operating systems in the context of our business and the industry in order to allow Businessland to be positioned for future profitability and growth," said David A. Norman, Businessland chairman, president and CEO.

Businessland attributed the decline to operating losses both in its international markets and its Computer Craft retail stores and said its decision to "aggressively pursue worldwide expansion" had strained the company's resources.

Peachtree Software acquires Layered

Norcross, Ga. — Peachtree Software Inc., a longtime supplier of DOS accounting software, announced last week that it has acquired Layered Inc., developer of popular accounting programs for the Mac. Terms of the agreement were not disclosed.

Peachtree, based here, will gain access to Layered's Front Desk multi-user scheduling program, Insight Expert modular accounting package and atOnce! small-business accounting program. atOnce! competes with Peachtree's Back to Basics Macintosh, which Peachtree said it will discontinue, although the company will continue to support it.

Layered will relocate from its Boston offices to Norcross, where it will operate as Peachtree's Mac products division. Layered President Bill Savoy will remain at the helm.

"We see [the acquisition] as a vote of confidence for the Mac accounting market," said Sharman Egan, Peachtree director of marketing. The transaction is expected to be completed this week.

Maxtor completes $46 million acquisition of MiniScribe

San Jose, Calif. — Maxtor Corp. this month announced that it has completed its $46 million acquisition of the assets of the former MiniScribe Corp. A new wholly owned Maxtor subsidiary, called Maxtor Colorado Corp., that is based at MiniScribe's Longmont, Colo., headquarters, will continue development of the now-defunct company's line of hard drives, particularly a new family of inch-high 3.5-inch drives.

Maxtor named Taroon C. Kamdar president and chief operating officer of the new subsidiary. Kamdar, previously vice president of corporate development at Maxtor, will report to Maxtor CEO George M. Scalise.

Maxtor, based here, successfully bid for MiniScribe's assets in an auction conducted by the U.S. Bankruptcy Court in Denver in April. Maxtor said it has reached agreements with virtually all of MiniScribe's key component suppliers. "We have our factories up and running, we are ramping production at a rapid rate, and our customers are receiving products on schedule once again," Scalise said.

Monitor forum

From previous page

cussion expressed dismay that Macworld magazine, which organized the forum, failed to appear. Even more disturbing, said several vendor representatives, was the unexpected barrage of questions from members of the press, including CNN. Participants had been told that the press would be there only for photos.

"Every manufacturer felt set up," said one attendee. □

Congress

From previous page

suggested setting industry standards limiting ELF emissions.

Nagel also said that Apple plans to adopt its own emissions standards and is "prepared to contribute research money" to government and private-sector organizations studying the issue.

Nagel went on to recommend a "consortium approach" to researching the effects of VDT exposure.

Apple's testimony before Congress occurred the same week it joined representatives of third-party monitor manufacturers in San Jose, Calif., at a forum to discuss emissions (see related story, previous page).

Both events come about a month after Apple posted an AppleLink memo stating its commitment to safe products and to further researching the issue. In that memo, Apple stated its belief that "computer monitors are safe ... and evidence on the issue is so far inconclusive." □

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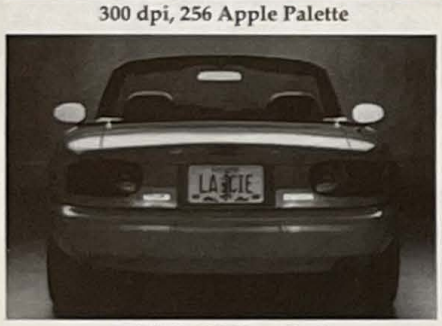

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Customer Cache services

Customer Cache Inc. provides dealers with:

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Apple OKs marketing service for resellers

By Raines Cohen

Raleigh, N.C. — Apple last month encouraged dealers to take advantage of a unique service offered by a small company here to help them keep in closer touch with customers.

In a memo sent to dealers, Apple said the resellers now can use Apple management-assistance credits known as "AppleFund" to contract the services of Customer Cache Inc., a 5-year-old direct-marketing service bureau.

The company helps dealers by managing their customer databases and providing mailing services. Customer Cache employees enter information about customers and their systems from dealer copies of invoices at the time of purchase. The company uses the data to send out thank-you letters, as well as service surveys, discount coupons, a warranty card and AppleCare solicitations (requiring only a signature) when warranties expire.

Dealers receive monthly reports on customer buying patterns, broken down by customer, salesperson, product, store and model, as well as telemarketing-oriented reports on customers with expiring warranties. Customer Cache also helps businesses obtain business-reply postal permits and prepare newsletters as well as targeted advertising.

The company has been working with Apple for some time on pilot projects with dealers in North Carolina, according to Brooke Gordon, Customer Cache president.

"They're very prompt and provide good personalized service to our customers," said Pat Smith, vice president of Carolina Computer Stores (part of Computersmith Corp.), a dealer in Raleigh.

Customer Cache Inc. is at 2211 The Circle, Raleigh, N.C. 27608; (919) 828-2787. □

Fox Developer Conference

Perrysburg, Ohio — Fox Software Inc. has set an October date for its annual Fox Developer Conference.

To be held Oct. 7-10 in Toledo, Ohio, the developer conference will offer more than 36 seminars and feature a keynote from Fox CEO David Fulton.

Topics to be covered include marketing, third-party product support, and programming for both Mac and MS-DOS environments. Fox said it expects close to 1,000 attendees. The company plans to make a directory of all its developers available during the three-day conference.

A two-day trade show with supporting vendors will run concurrently with the conference. Registration is $795.

Fox Software is at 134 W. South Boundary, Perrysburg, Ohio 43551; (419) 874-0162. □

It's 9:01. And it's do-or-die.

All 5 offices of Venture Vessels have just 10 minutes to finish a presentation. Together.

San Francisco Los Angeles Newport Philadelphia Sydney

It's 9:05.

For a moment, things run aground. Philadelphia points out a need for another sail. And, thanks to Aspects, they're able to alter the graphic right there for everyone to see.

San Francisco Los Angeles Newport Philadelphia Sydney

It's 9:10.

The conference breezes right along with text contributions made together by San Francisco, Los Angeles and Newport. And everybody agrees—the presentation is ready to set sail.

San Francisco Los Angeles Newport Philadelphia Sydney

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GROUP TECHNOLOGIES

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Authorware

From Page 85

to company CEO John C. "Bud" Colligan, a former director of higher-education marketing at Apple.

"Airlines, where the cost of a mistake can be extreme, are developing computer-based training modules with Authorware," Colligan said. "Fokker Aircraft B.V., for example, is creating modules covering tasks such as gate refueling and off-line maintenance for its complete line of short-haul aircraft, and they will be made available to Fokker customers such as U.S. Air and Swissair."

According to Lakewood Research of Minneapolis, U.S. corporations with 100 or more employees spent more than $47 billion in formal training in 1989. The computer-based or interactive video-training segment of that figure is about $4 billion today, but it is rapidly growing.

" 'Big six' accounting firm Arthur Andersen & Co., for example, spends about 10 percent of its revenues in professional development," Colligan said. "The company is looking for ways to move away from stand-up instruction and instructional videos provided at one site to creating digitally based courseware used at many sites."

Authorware Professional uses a visual programming language and a data-flow model to create simulations that can include text, graphics, sound, video and animation. The software grew out of a research project at Control Data Corp. and was introduced on the Mac in 1986 as Course of Action by Michael Allen, company founder and chairman.

Authorware has taken an unusual approach to marketing its personal computer application. Unlike the $695 MacroMind Director, for example, Authorware Professional is not available through the reseller channel. "We took a risk putting in a direct-sales force and tripling the price of Authorware Professional to $8,000 last year," Colligan said.

Revenues have doubled over the past year for the privately held company and are expected to at least quadruple in 1991. In the long term, Colligan hopes to become like database giant Oracle Corp., a billion-dollar company that provides and supports mission-critical applications. Currently, about 70 percent of the company's revenues come from software sales and 30 percent from service and support, Colligan said.

The company plans to expand its product line this fall when it ships a version of Authorware Professional for Microsoft Windows 3.0. "We generally recommend the Mac to our clients, but having a Windows 3.0 version gives our clients a choice," Colligan said.

Authorware reportedly is working on a low-end version of the product that could be sold through the reseller channel next year.

Until then, the company will continue its tactic of high-end software with a large element of support.

"Most corporations have to overcome a fear threshold when it comes to multimedia, so providing a service and support component is critical to jump starting the market," said Denise Caruso, editor of the Media Letter in Belmont, Calif. □

Aldus

From Page 85

panies free developer tool kits, copies of Aldus products for $100 each, prerelease versions of new products under non-disclosure and priority technical support from the Aldus Developers Desk.

Other benefits include a quarterly newsletter, the chance to participate in Aldus trade-show exhibits and a 50 percent discount on registration fees for a series of developer conferences that the company will launch later this year.

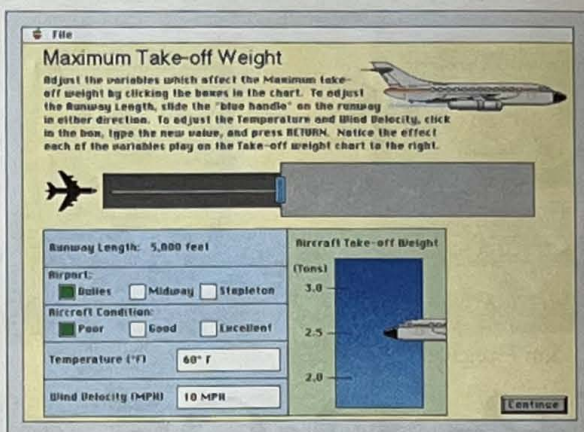
Membership fees will be $300 per year. Aldus said it will continue to offer basic support, including developer tool kits at cost and a 60 percent discount on Aldus products, for developers who choose not to join.

▶ A separate, two-tiered Aldus Authorized Imaging Center program is designed for service bureaus large and small. To qualify, bureaus must have one year's experience and provide client references. Authorized centers pay $750 for the first year and $500 annually thereafter. They receive customer referrals, exposure in Aldus Magazine and rights to use the Aldus logo in advertising.

Alternatively, service bureaus can become Aldus Registered Imaging Centers for $50 per year.

Both levels receive toll-free support, a private electronic bulletin board, free Aldus Technical Notes, and priority shipping of updates and new releases.

Aldus is at 411 First Ave. S., Seattle, Wash. 98101; (206) 622-5500. □


File
Maximum Take-off Weight
Adjust the variables which affect the Maximum take-off weight by clicking the boxes in the chart. To adjust the Runway Length, slide the "blue handle" on the runway in either direction. To adjust the Temperature and Wind Velocity, click in the box, type the new value, and press RETURN. Notice the effect each of the variables play on the Take-off weight chart to the right.
Runway Length: 5,000 feet
Airport:
Dulles
Midway
Stapleton
Aircraft Condition:
Poor
Good
Excellent
Temperature (°F)
60° F
Wind Velocity (MPH)
10 MPH
Aircraft Take-off Weight
(Tons)
3.0
2.5
2.0
Continue

American Airlines and Authorware will jointly develop 152 hours of training courses for use by 50,000 of the airline's employees.

Authorware, American sign big contract

Authorware inked a multi-million dollar contract last month with American Airlines Inc. to create a suite of multimedia learning applications for reservation agents, flight attendants, international security, and ticket, gate and cargo personnel.

The contract, worth an estimated $3.5 million, includes consulting services for developing the courseware as well as the installation of 60 modular Macs running Authorware Professional.

The applications will be used at American Airline's Learning Center in Fort Worth, Texas, to provide initial and refresher training for 50,000 of the company's 90,000 employees.

The courseware created with Authorware Professional will replace American's SABRE-Assisted Instruction (SAI) lessons, which is text-only, computer-based training.

"SAI is effective but pretty deadly stuff," said Lance Beebe, manager of training systems development at American Airlines. "With Authorware, we can enhance the material with graphics and animation and possibly audio and interactive video."

Beebe said he expects an overall 50 percent reduction in training time per employee with Authorware-created curricula, reducing 300 hours of lessons to 152.

"We are in the early stages of laying out the work, which will take 16 months to complete," he said. "Initially, Authorware's consulting staff will do the development with our subject-matter experts, but by the end of the project we will do the authoring." — *By Daniel Farber*

MarketWEEK

STOCKWATCH

Businessland hit hard in stock market slump

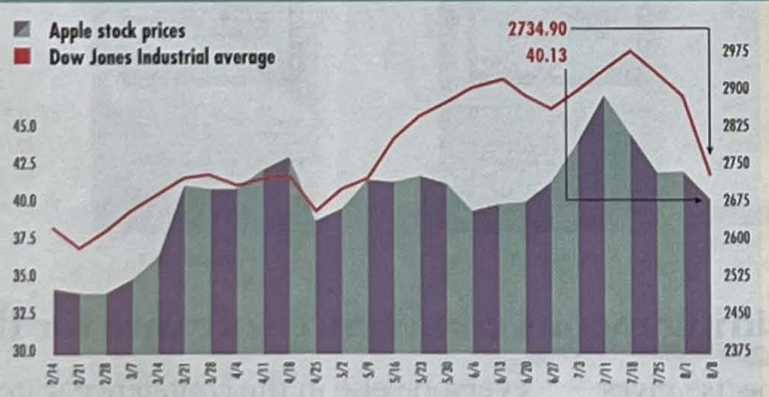
Amid last week's market turmoil, none of the 12 stocks in MacWEEK's portfolio showed a gain.

Hardest hit was Businessland Inc. It lost the largest percentage on the New York Stock Exchange Aug. 6, when it slid 58 percent to $2.88. Bargain hunters quickly snapped up shares, trimming its weekly loss to slightly more than 45 percent.

Sun Microsystems Inc. fared the best last week, even if its stock did close in the red. Its final score: down nearly 4 percent to $30.25.

Sun agreed to sell 4.58 million shares of its common stock to AT&T for $192 million, hiking AT&T's stake in Sun to 14.7 percent.

Other high-tech companies hit by the Dow's steep drop were Adobe Systems Inc., whose stock fell 15.5 percent; Ashton-Tate Corp., down 13.3 percent; and Seagate Technology Inc., off 12.9 percent. Apple closed the week at $40.13, down 5.3 percent.



Mac-related stocks

	CLOSING 8/1/90	CLOSING 8/8/90	PERCENT CHANGE	P/E RATIO	ANNUAL HIGH	ANNUAL LOW
MAC-RELATED COMPANIES						
Adobe Systems Inc.	35.50	30.00	-15.49	17	50.75	14.00
Aldus Corp.	28.00	25.75	-8.04	20	29.25	12.25
Apple	**42.38**	**40.13**	**-5.31**	**10**	**50.38**	**31.88**
Ashton-Tate Corp.	10.38	9.00	-13.25	-7	15.13	8.13
Businessland Inc.	6.88	3.75	-45.45	-5	13.63	2.00
Microsoft Corp.	66.75	63.50	-4.87	27	80.75	27.63
Motorola Inc.	80.38	76.00	-5.44	19	88.38	52.75
Seagate Technology Inc.	12.63	11.00	-12.87	6	19.75	10.50
3Com Corp.	15.88	13.75	-13.39	20	19.00	10.00
INDUSTRY INDICATORS						
Digital Equipment Corp.	74.38	69.25	-6.89	128	103.38	67.38
IBM Corp.	111.63	103.13	-7.61	15	123.13	93.38
Sun Microsystems Inc.	31.50	30.25	-3.97	67	37.25	13.38

Compiled by Nerdby International Inc., Boulder, Colo.

MARKETWATCH

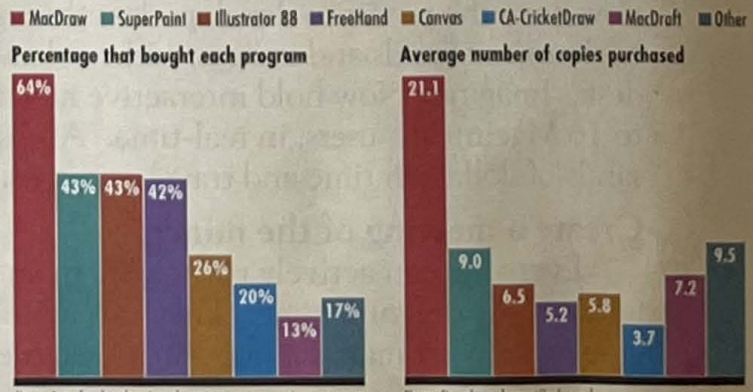
MacDraw popular with MacWEEK subscribers, study shows

Claris Corp.'s MacDraw and MacDraw II top the list of drawing programs bought by MacWEEK subscribers in the MacWEEK Purchase Involvement Study.

The study also revealed that a total of 76 percent of subscribers bought drawing programs in the past 12 months. Of that number, 64 percent purchased an average of 21.1 copies of MacDraw.

Silicon Beach Software's SuperPaint and Adobe Systems Inc.'s Illustrator tied for second place in popularity, with 43 percent each. Those who purchased SuperPaint said that they bought an average of nine copies, while Illustrator buyers said that they bought 6.5 packages on average. — *By Nathalie Welch*

Claris MacDraw dominates in drawing programs



Base: Involved in buying drawing programs in past year
Base: Purchased specific brand
Source: MacWEEK Purchase Involvement Study/The Research Spectrum

Say GA 18 times this year.

Jan 16

Jan 30

Feb 27

Mar 6

Mar 27

Apr 24

May 8

May 22

Jun 26

Jul 31

Aug 7

Aug 21

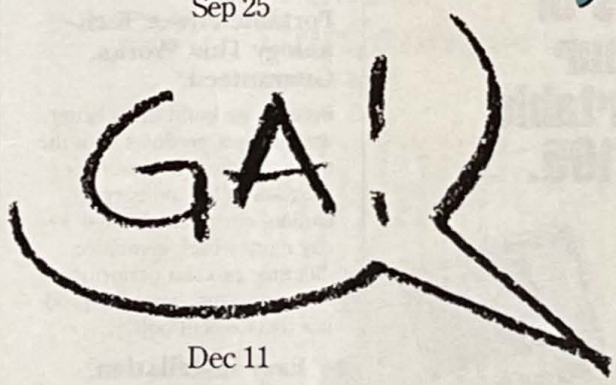
Sep 11

Sep 25

Oct 2

Oct 30

Nov 20



Dec 11

MacWEEK's been a ga-ga proponent of Macintosh graphic arts technology since day one. This year, MacWEEK's exclusive Graphic Arts report appears 18 times. Turn to GA to keep up-to-date on all aspects of graphic design and production as best-enhanced by the Mac.

Advertisers: GA closes early. Contact your MacWEEK account executive or call 415-243-3500 today to reserve space in the next issue.

Off-site: How suite it was

Reports from the big August blowout in Boston always contain a reference to the brutal heat, but this year Mac the Knife decided it would be in much better taste to ignore such relatively insignificant inconveniences and spent his time in Boston concentrating on some real challenges, such as how to get in on some of the off-site secret sneak previews that were held during this summer's show.

No. 1 on the list of off-site must-sees were samples of Apple's new fall Macintosh line. Even though traffic was relatively fluid, the privileged appreciated riding to the site in the air-conditioned comfort afforded by the limos Apple so kindly provided.

Also, some of the same insiders who got to see the new Macs were privy to demos of the Mac version of Symantec's Q&A natural language database. No surprises there.

Meanwhile, the Knife's sources at Adobe insist that the company is finally getting close to turning those fax/laser-printer prototypes that have been shown around for years into real products. The point of this product is to make it as easy to send a fax as it is to generate a laser printout, meaning that users won't have to print first and then scan back in to fax.

The Knife's skepticism was far from singular when Lotus' Don Casey (21 years with IBM, followed by two years at Apple as an Apple Products executive) made a statement in his new capacity as head of the Lotus spreadsheet division. A Mac 1-2-3? "You ain't seen nothin' yet," he said. But when the subject of when said product might actually ship was broached, the Knife agreed with Jean-Louis Gassée, who commented, "You'll forgive me if I don't hold my breath."

Sweet anticipation. One of the most satisfying aspects of uncovering plans for new Mac products in mid-gestation is being around for the actual birth announcement. The long-awaited Mac version of Ventura Publisher was just such an event. The VP Mac announcement also seemed to have had its effect on Interleaf, whose Mac version of Interleaf Publisher has been languishing on the shelf, in no small part because of the product's decidedly un-Maclike user interface. The Knife reports that a new, *Mac vérité* version is planned for next year. It should at last provide some competition for Frame Technology's FrameMaker for the Mac and the aforementioned Ventura Mac.

The Knife also discovered that Kodak management has been getting a little bored watching Hewlett-Packard rake in the inkjet money with the HP DeskWriter. The solution, logically enough, is a competing product from Kodak. If the plans of the Rochester boys and girls work out, it will be a major threat to HP's dominance of the 300-dpi inkjet-printer market.

Lip slips. Apple PR types winced when Apple Pacific President Ian Diery, in a speech to reporters and analysts, referred to "the announcement of the integration of the Apple II and Mac lines" as if it had already happened.

Meanwhile, across town, in a keynote panel discussion, Microsoft's applications chief, Mike Maples, brazenly mentioned "two new Mac applications" that will ship after System 7.0, along with major upgrades to existing programs.

One of those applications will most likely be a multiplatform database. While Claris goes ahead with its development of a Windows version of FileMaker Pro, Microsoft seems to have revived its old project for a mainstream database for both the Mac and Windows. Like FileMaker, the Microsoft product would be a broad market-productivity application rather than a development environment like dBASE IV or 4D.

Of course, no Mac gathering is complete nowadays without some serious gossiping about the release of System 7.0. Sources at the show indicated that System 7.0 apparently will enter the beta phase in a few weeks. The Knife reports that Apple will also be rolling it out to Apple field sales and system engineers, once it figures out how to support the field. The field reps will be testing the new OS version in the real world, using the real-world applications that customers deal with on a regular basis. □

In what promises to be one of the most interesting months in memory, don't forget the tried-and-true Mac the Knife MacWEEK mug strategy. The critical component is your insider tip. Call the Knife at (415) 243-3500 or MCI (MactheKnife).

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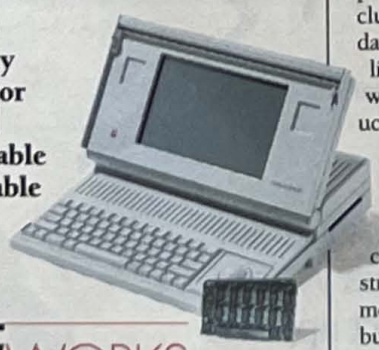

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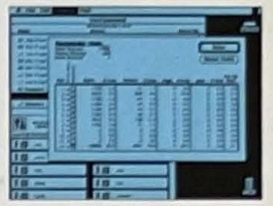

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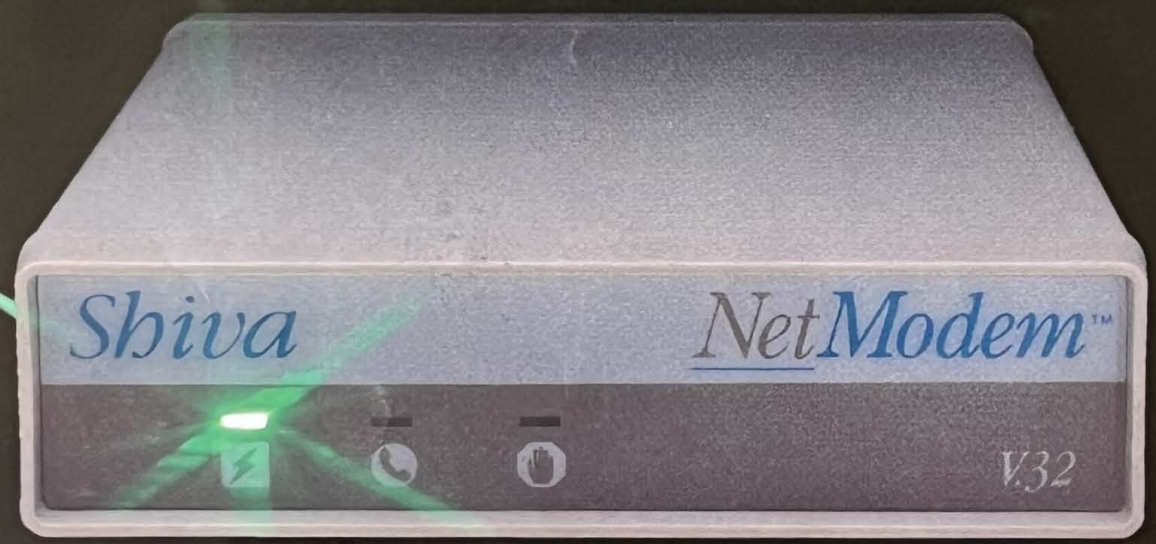
The Power.



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